Operating Instructions
Bedienungsanleitung
Manuel d'instructions
Gebruiksaanwijzingen

Digital Control Tuner/Cassette Player/CD-Auto Changer Controller
Digital Control Tuner/Cassettenspieler/CD-Wechsler
Tuner à commande numérique/Lecteur de cassette/Bloc de changeur automatique de disques compacts (CD)
Digitale Gestuurde Tuner/Cassettespeler/Automatische Kompaktdiskwisseleenheid

CQ-F61EG

Panasonic

Before operating this set, please read these instructions completely.
Bitte lesen Sie diese Bedienungsanleitung vor der Inbetriebnahme aufmerksam durch.
Nous vous recommandons de lire attentivement ces instructions avant d'utiliser cet appareil.
Lees deze gebruiksaanwijzing in zijn geheel door alvorens deze eenheid in gebruik te nemen.

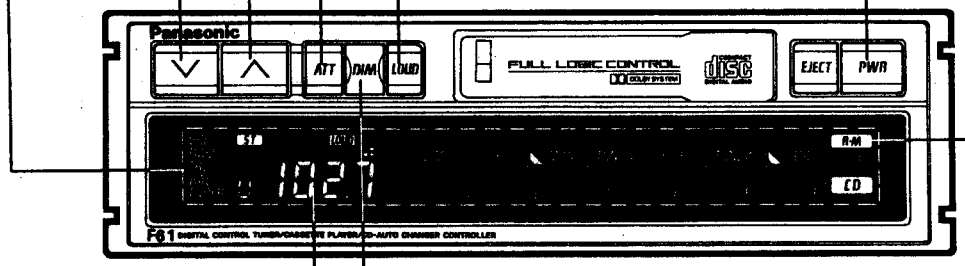
Contents

Main Controls 4
Radio Controls 4
Cassette Controls 5
CD Controls 5
Wireless Remote Control 6
Precautions 7
Precautions Before Operating This Unit 7
I Listening to the Radio 8
Manual Tuning 8
Automatic Tuning 8
To Set the Preset Station 9
To Scan Preset Stations 9
II Main Controls 10
III Selection of Display Modes 12
IV SK/BK, DK (VF) Reception (Traffic-Information Broadcast Station) 13
SK/BK Reception 13
DK Reception 13
V Listening to Cassette 14
TPS Operation 15
Repeat 18
Blank Skip 16
Pause 16
Tape Scan 16
Radio Monitor 17
Metal Tape Selector 17
Dolby "B" Noise Reduction 17
VI Listening to the Compact Disc (Optional) 18
Radio Monitor 19
Random 19
Scan 19
Display Selector 19
To Memorize Track Numbers 20
How to Cancel Memory Mode 20
Recall 20
Memory-Play 20
VII Notes on Proper Use (Wireless Remote Control) 21
VIII Operation of Wireless Remote Control 21
Main Controls 21
Radio Controls 22
Cassette Controls 22
CD Controls 23
Battery Replacement 24
Notes on Batteries 24
How to Fix the Magic Tape 24
Display Conditions 25
Error Display 25
Theft-Prevention System 26
How to Register Your Secret Personal Codes 26
How to Erase Memorized Secret Personal Codes 26
How to Decode Your Secret Personal Codes 27
Notes on Cassette Tape 28
Maintenance 28
Basic Noise Suppression Methods 28
Composition and Wiring Connection 29
In Combination with a CD Changer 30
Fuse 31
Installation Hints 31
Installation Procedures 31
Specifications 34

Inhaltsverzeichnis

Hauptkontrolltastatur 4
Bedienfelder in Radio-Betriebsart 4
Kontrolltastatur des Cassettengeräts 5
Bedienungsfeldbelegung bei CD-Betrieb 5
Fernbedienungsteil 6
Vorsichtsmaßnahmen 35
Vorsichtsmaßregeln zum Betrieb dieses Geräts 35
I Rundfunkempfang 36
Manuelle Abstimmung 36
Automatische Sendereinstellung 36
Eingabe der Festsender 37
Suchen der Festsender 37
II Hauptbedienungselemente 38
III Anwahl der Anzeigearten 40
IV Empfang von Verkehrsfunkinformationen (SK/BK, DK (VF)) 41
SK/BK Empfang 41
DK-Empfang 41
V Tonband-Wiedergabe 42
Bandprogrammsensor (TPS) 43
Wiederholfunktion 44
Leerstellenübersprungfunktion 44
Pause 44
Titelsuchlauf 44
Radio-Monitor 45
Reineisenband-Wahlfunktion 45
Dolby "B"-Rauschunterdrückung 45
VI Compact-Disc-Spielbetrieb (mit Zusatzgerät) 46
Radio Monitor 47
Random 47
Titelanspielbetrieb 47
Wahl der Anzeigeart 47
Eingabe von Titelnummern in die Speicher 48
Löschen der Speicherwerte 48
Datenabruf 48
Memory-Play 48
VII Richtige Handhabung des Fernbedienungsteils 49
VIII Bedienung der drahtlosen Fernbedienung 49
Hauptbedienungselemente 49
Radiokontrolltastatur 50
Kontrolltastatur des Cassettengeräts 50
Bedienungsfeldbelegung bei CD-Betrieb (als Zubehör) 51
Batteriewechsel 52
Hinweise betr. Batterien 52
Anbringen des Klettenbandes 52
Displayanzeigen 53
Fehleranzeigen 53
Diebstahlsicherung 54
Eingabe des Persönlichen Geheimcodes 54
Löschen des Persönlichen Geheimcodes im Speicher 54
Geräteentschlüsselung mit Hilfe des Persönlichen Geheimcodes 55
Anmerkungen über Cassettenband 56
Wartung 56
Grundentstörung 56
Elektrischer Aufbau und Anschlüsse 57
Bei Verwendung mit einem CD-Wechsler 58
Sicherung 59
Einbauhinweise 59
Einbauvorgänge 59
Technische Daten 82

MAIN CONTROLS / NAUPTKONTROLLTASTATUR / CONTROLES PRINCIPAL / VOORNAAMSTE REOELAARS



Attenuator
Dämpfungsfunktion
Atténuateur
Verzwakkingsregelaar

Power Switch
Ein/Aus-Schalter
Interrupteur général
Netschakelaar

Volume/Bass/Treble/Balance/Fader Control
Einstellung von Lautstärke/Höhen/Tiefen/Balance "links-rechts"/Balance "vorne-hinten"
Commande Volume/Basses/Aigus/Balance/Fader
Volume/Lage tonen/Hoge tonen/Balans/Faderregeling

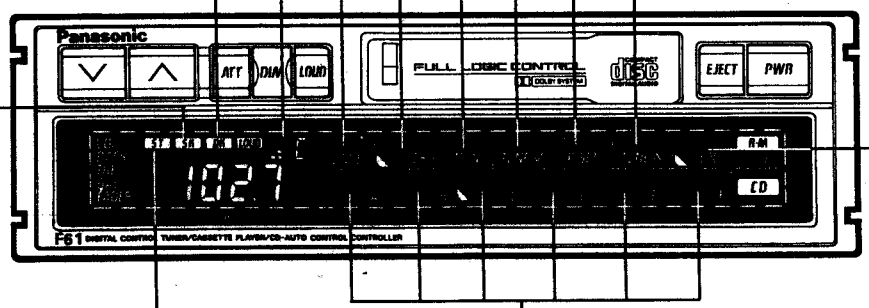
Loudness Control
Gehörrichtige Frequenzgangkorrektur
Correcteur physiologique
Loudnessregeling

LCD Display Panel
Flüssigkristalldisplay
Tableau d'affichage à cristaux liquides
Displaypaneel

Dimmer
Lichtstärkeregler
Gradateur
Dimmer

Theft-Prevention Code Key
Codeeingabe der Diebstahlsicherung
Touche de code d'anti-vol
Anti-diefstalkodetoets

RADIO CONTROLS / DEDIENFELDER IN RADIO-BETRIEBSART / CONTROLES RADIO / RADIO REOELAARS



Mono/Stereo Selector
Mono/Stereo-Feld
Sélecteur mono/stéréo
Mono/stereo keuzeschakelaar

BK/DK Switch
BK/DK-Feld
Commutateur BK/DK
BK/DK schakelaar

Down Tuning
Sendersuchlauf abwärts
Accord en descendant
Afstemmen lager

Band Selector
Wellenbereich-Feld
Sélecteur de gammes d'ondes
Golfband keuzeschakelaar

Preset Scan
Festsender-Suchlauf
Exploration des stations préréglées
Voorkeuzeaftasting

BK Indicator
BK-Anzeige
Indicateur BK
BK indikator

Up Tuning
Sendersuchlauf aufwärts
Accord en montant
Afstemmen hoger

DK Indicator
DK-Anzeige
Indicateur DK
DK indikator

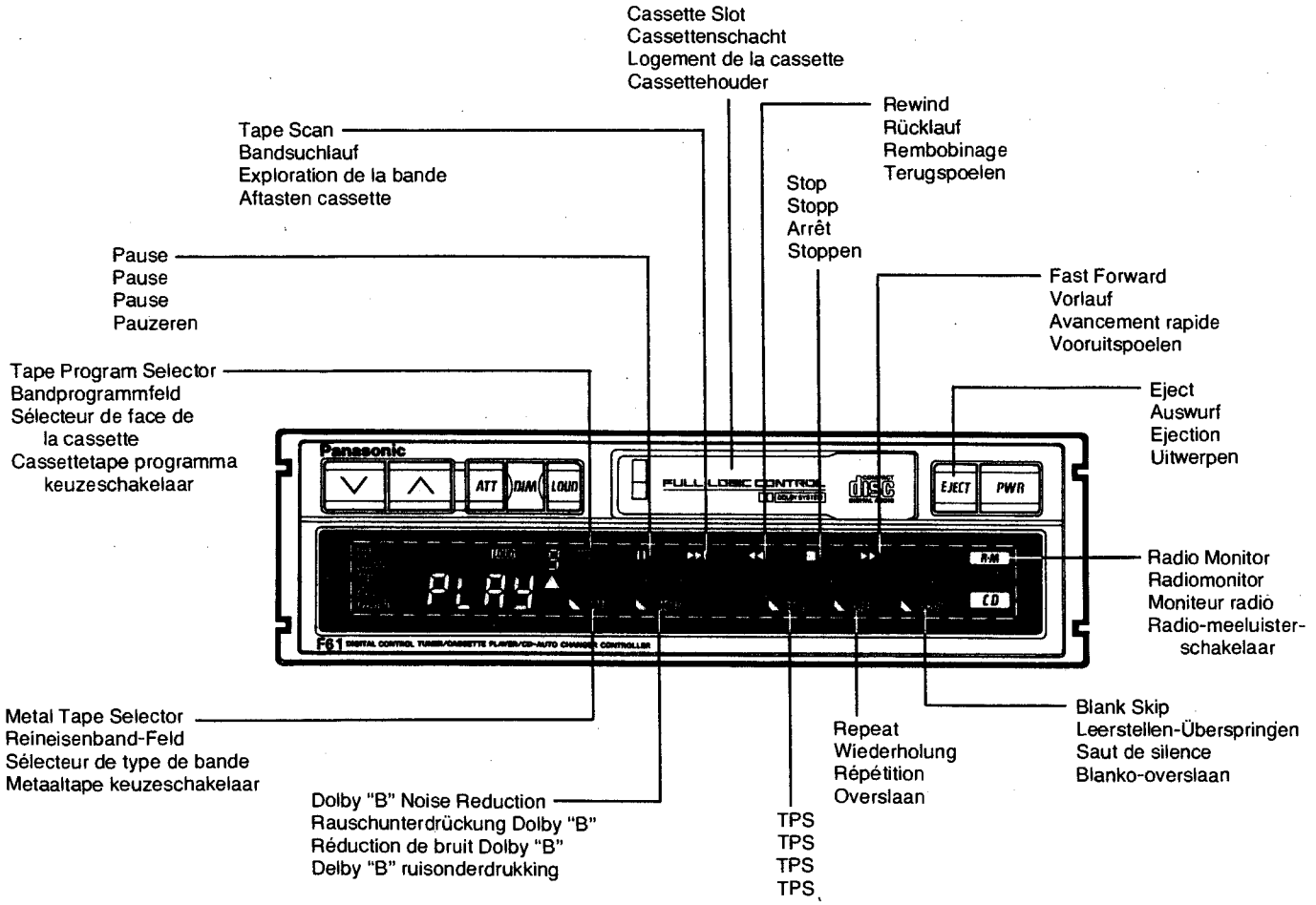
SK Indicator
SK-Anzeige
Indicateur SK
SK indikator

Local/Distant Sensitivity
Empfindlichkeit nah/fern
Sensibilité local/distant
Keuzeschakelaar voor lokaal/afstandontvangst

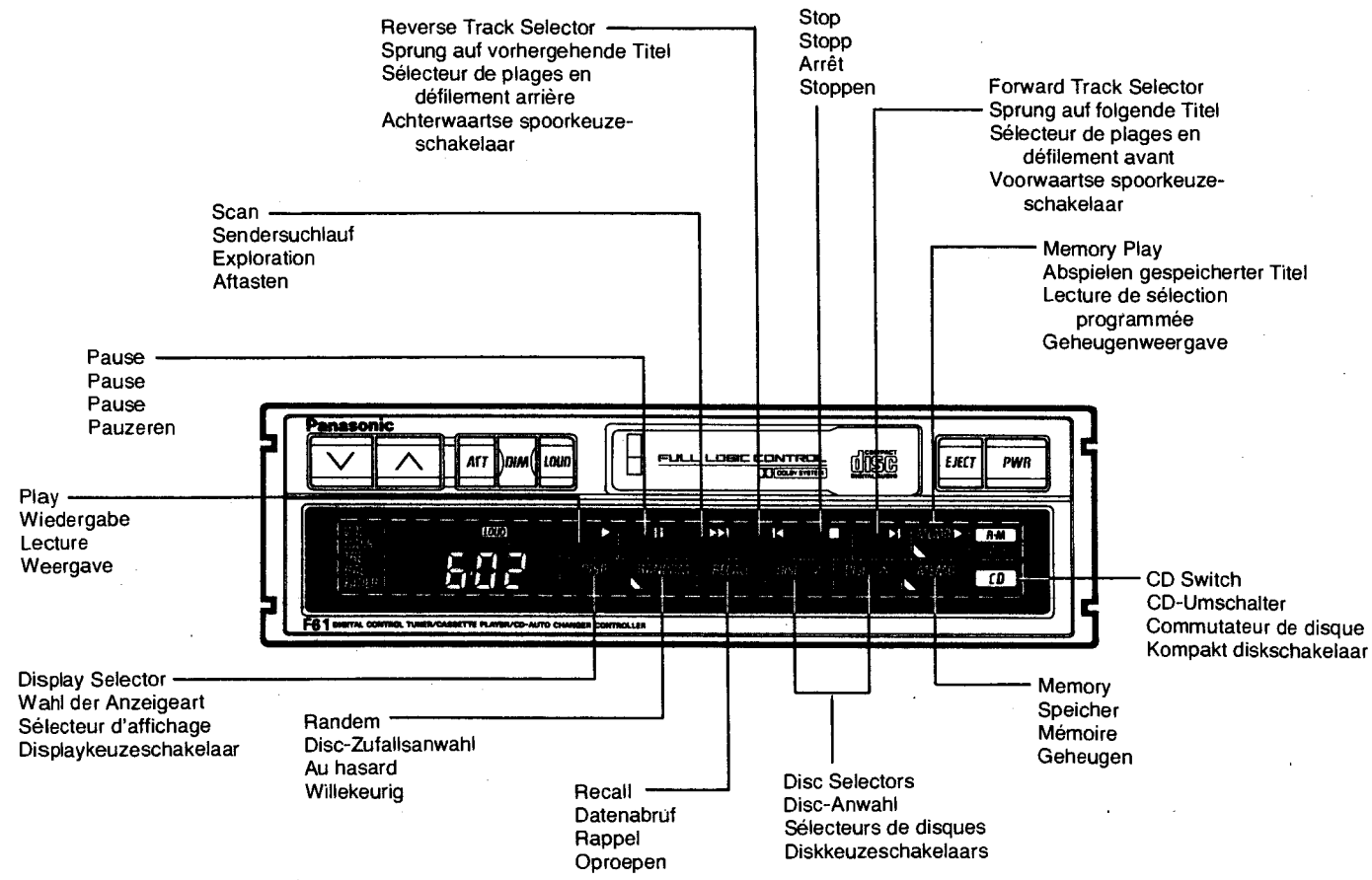
FM Stereo Indicator
UKW-Stereoanzeige
Indicateur FM stéréo
UKW stereo indikator

Preset Station Selectors/Designated VF Area Keys
Festsenderfelder/VF-Bereichsfelder
Touches de sélection des stations préréglées/sélection des zones VF
Voorkeuzezendertoetsen/VF bereiktoetsen

CASSETTE CONTROLS / KONTROLLTASTATUR DES CASSETTENGERÄTS / CONTROLES DE CASSETTES / CASSETTE REGELAARS

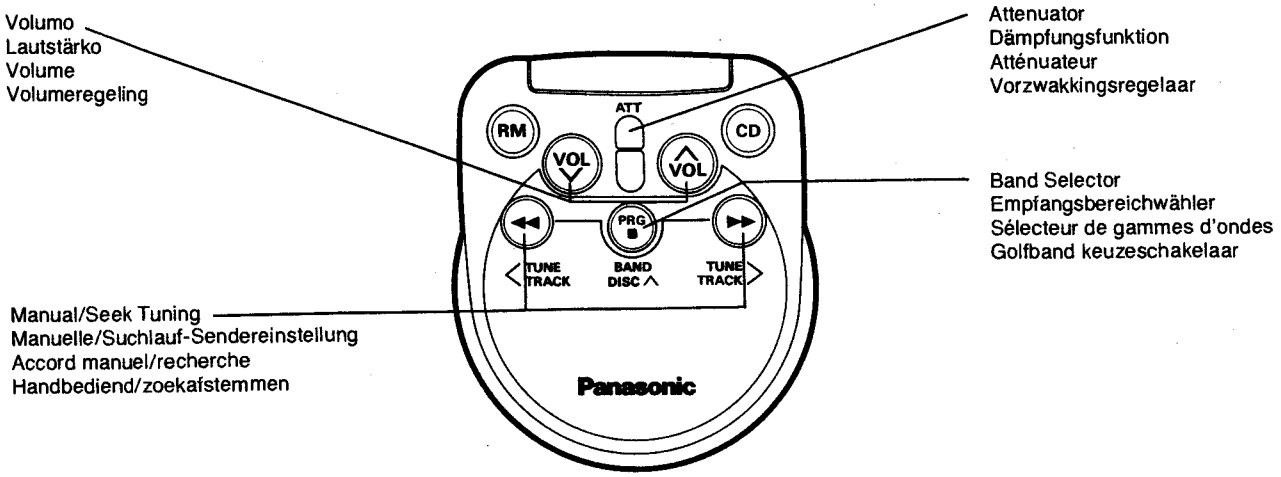


CD CONTROLS / BEBIENUNGSFELDBELEGUNG BEI CD-BETRIEB / COMMANDES DE DISOUE / REGELAARS VAN DE KOMPAKT BISKSPELER

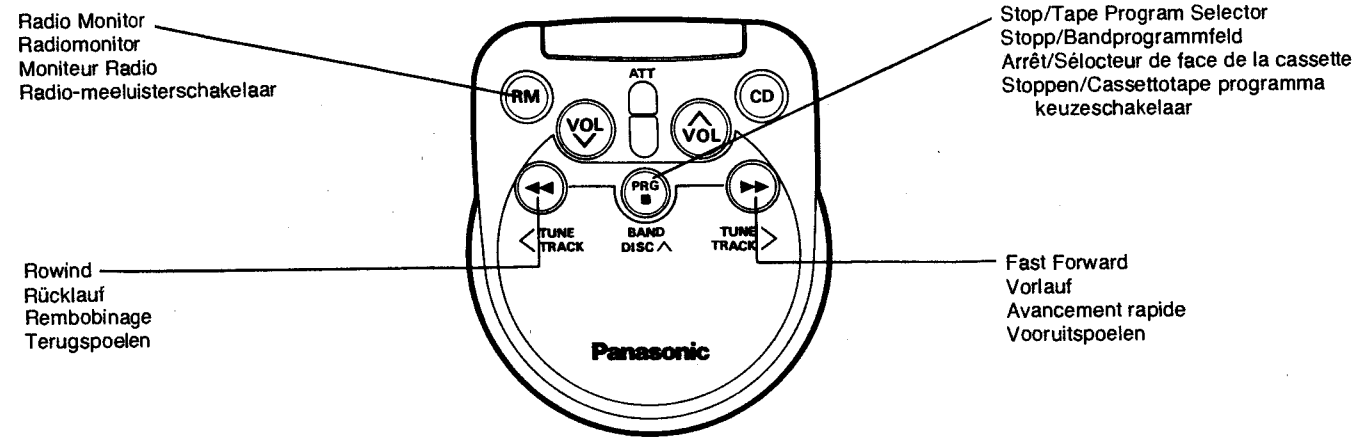


WIRELESS REMOTE CONTROL / FERNBEDIENUNGSTEIL / TELECOMMANDE / DRAADLOZE AFSTANDSBEDIENUNG

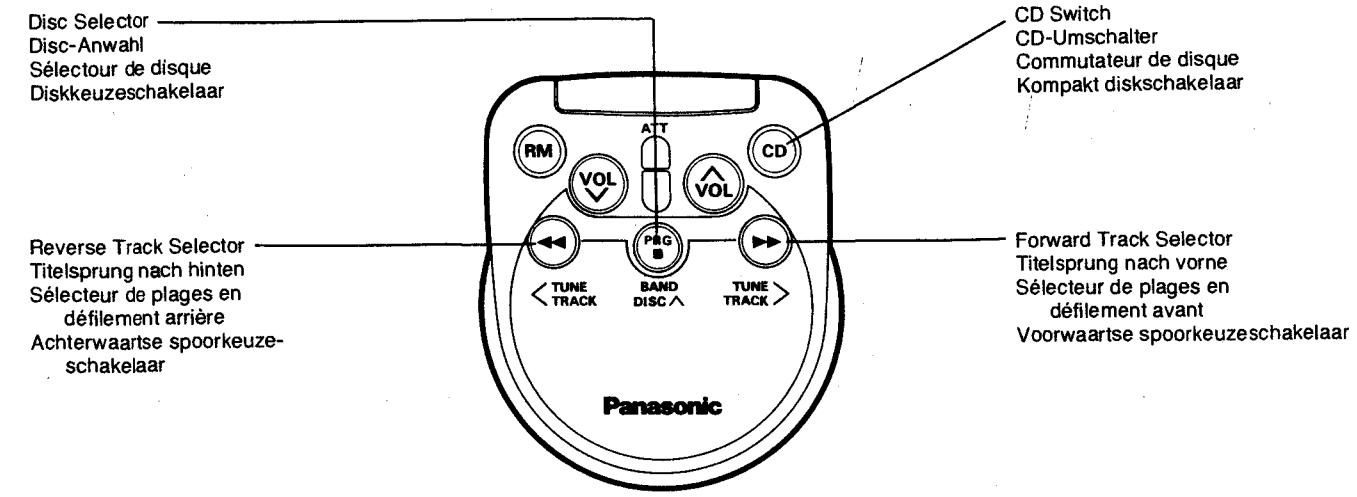
Main & Radio Controls/Haupt- und Radio Kontrolltastatur/ Controles radio & principal/Voornaamste & radio regelaars



Cassette Controls/Kontrolltastatur des Cassettengeräts/ Controles de cassettes/Cassette regelaars



CD Controls/Tastenbelegung bei CD-Betrieb/ Commandes de disque/Regelaars van de kompakt diskspeler



Panaaonic welcomes you to their constantly growing family of electronic product ownere.
We endeavor to give you tbe advantages of precise electronic and mechanical engineering, of being manufactured with carefully eelected componente, and of being assembled by people who are proud of the reputation their work has built for our company. We know thie product will bring you many hours of enjoyment, and that after you discover the quality, value and reliability we have built into it, you too will be proud to be a member of our family.

Precautiona

VCLUME LEVEL
For your driving eafety, keep the volume level low enough to be aware of road and traffic conditions.

CAR VENTILATICN
If your car ie parked for several hours in direct sunlight, the temperature ineide the car may become very high. It is advlaable to drive the car and give the interior a chance to cool down before awitching tbe unit on.

CAR WASHING
Do not expoee thie equipment (including the speakers and tape) to water or exsessive moieture to avoid electrical shorta which may cause fire, or otber damage.

TAPE MECHANISM
Keep magnete, ecrewdrivers and other metallic objects away from the tape mechanism and tape head.

PeWER SUPPLY
Thie equipment is dosigned to be used only in a 12 volt, DC bettery syetem (car) with negative ground.

SERVICE
This unit ie made of precision parts. Do not attempt to dieaasemble or adjuet any parts. For repair, please consult your neareet Panaaonic Service Center.

[illegible]

- Some operations in this unit need careful attention. For safety reasons do not perform tone settings and any memory settings while driving your car. The built-in microprocessor has a very limited time to set and careful attention is needed on your part.
- A sensor "beep" tone will be heard in response to the command you have made every time any of the unit operation (except POWER) is done.

Before use, make sure to press eject button.
- In some ceses, cassette holder will be locked by the vibration during transportation.
  After wiring connections and installation are completed, turn on the power and press the eject button then tape deck will be ready for use.
- Do not insert cassette until all wiring connections are completed. This model is equipped with an electronic eject system. Cassette will not eject when power is off.
- When the temperature becomes very low, the dimmer may not work instantaneously. This is not a malfunction. Wait for some time and the dimmer will work regularly.

WARNING!

**Lithium batteries. Explosion danger.
Change ef batteries must only be done by qualified personnel and as described in the service manual.
Furthermore, that the batteries must only be changed with batteries of the same manufacture and type.**

ADVARSEL!

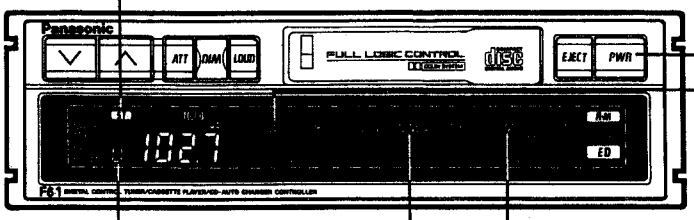
**Lithiumbatterier. Eksplosionsfare.
Udskiftning må kun foretages af en sagkyndig og som beskrevet i servicemanualen.
Batterierne kun må udskiftes med batterier af samme fabrikat og type.**

I. Listening to the Radio

The epereting procedurea are based in the order of succession according to their numbers.

MANUAL TUNINO

FM Stereo Indicator



Bend indicator
L/M/U

1 Press "PWR" on.

2 **Band Selector** (L/M/U)
Each time you touch the "LMU", the band will be selected.
The radio frequency appears on the display panel.
NOTE: For "VF" Reception (see Section IV), touch the "BK DK". However, if the band selector is touched, the previously tuned radio band [LW, MW or FM (UKW)] will be received again.

3 Touch "TUNE ∧ " for tuning to higher frequency.

4 Touch "TUNE ∨ " for tuning to lower frequency.

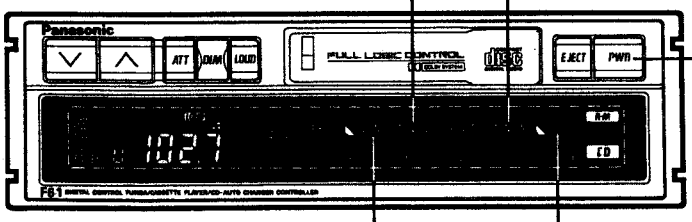
NOTE:
Each time you touch the "TUNE ∨ " (down) or "TUNE ∧ " (up), the frequency display will count down or up according to the radio band, as described below:
LW : 1 kHz each touch (For ex., 153→154→155→156→157→158———→261)
MW : 9 kHz each touch (For ex., 531→540→549→558→567→576———→1602)
FM (UKW) : 25 kHz each touch (For ex., 87.5→87.5 ▪ →87.5 ▪▪ →87.5 ▪▪▪ →87.6→87.6 ▪ →87.6 ▪▪ →87.6 ▪▪▪ ———→108.0)
NOTE: The " ▪ ", " ▪▪ " and " ▪▪▪ " indicate 25, 50 and 75 kHz frequency, respectively.

AUTOMATIC TUNING

2 **SEEK** (TUNE ∧ /TUNE ∨)
Touch "TUNE ∧ " or "TUNE ∨ " and hold it for more than half a second. Seek tuning will operate and will stop on the next station. The frequency is shown on the LCD display.

NOTE: To find the next station repeat this operation again and so on until the desired station is reached.

1 Press "PWR" on.

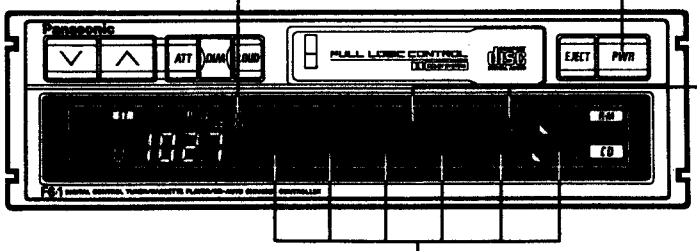


4 **Locel/Distant Seneitivity** (LOC)
Touch "LOC". At on, the " ◣ " mark is shown. To receive distant stations, switch off the "LOC".
While seek tuning, if you feel there are too many stations (even weak ones) being received, switch the "LOC" on in order to receive nearby local stations only.

3 **Mono/Stereo Selector** (MONO)
Touch "MONO". At on, the " ◣ " mark is shown. For normal FM stereo reception, switch off the "MONO".
Switch the "MONO" on in weak FM signal areas to obtain clear FM reception (monaural).

TO SET THE PRESET STATION (Preset Station Selectors (A-F))

Six (6) stations for LW, MW and FM (UKW), respectively, can be preset in the built-in electronic memory circuit on this unit. Each preset station selector can select one (1) station each on LW, MW and FM (UKW). Thus, the six (8) preset station selectors can be used to select a total of eighteen (18) stations.

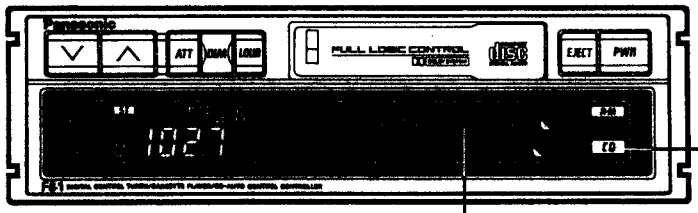


1 Press "PWR" on.

2 Tune in to the desired station either by seek or manual tuning.

3 Hold one of the preset station selectors in for about 2 seconds. (This will activate the memory circuit to preset the desired station.) Release the preset station selector after you hear the radio again. The station frequency being displayed will blink once to show that the memory has been set. A "beep" tone can be heard at the same time. The "◣"mark on each of the preset station selector will light up, if the selector is touched.

NOTES:
1. Memory will not activate when the preset station selector is "hurriedly" released.
2. If any of these preset station selectors is accidentally touched and held for several seconds (about more than 2 sec.), the previously "preset" station will be erased; instead, a different station will be registered into that memory circuit in which the band is playing.



To Scan Preset Stations (P · SET)

1 Touch "P · SET" and the radio begins to scan the stations being previously programmed into the preset station selectors (A-F) consecutively.
Six preset stations each for LW, MW and FM (UKW), respectively, can be scanned continuously. Each preset station is scanned for several seconds and the radio frequency is blinking on the LCD display. The "◣" mark on the scanned preset station selector (A-F) will light up consecutively. Also the channel number (1 ~ 6) lights up on the LCD display.

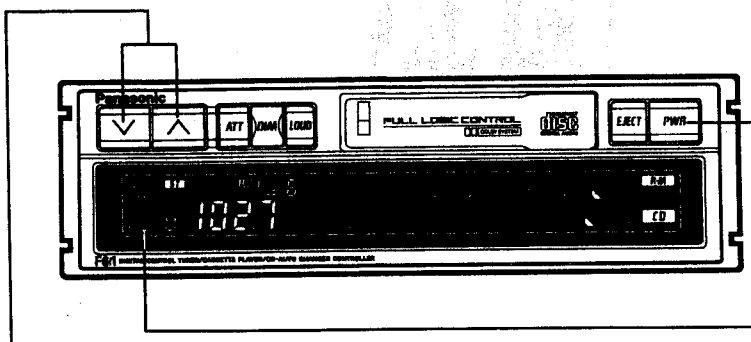
2 When reaching the desired station, touch "P · SET" again, or touch the preset station selector itself.

CD Switch (CD) (Option)
Change to the disc-play.

- During radio, if you change to the disc-play, simply touch the "CD".
  The display will change to the CD mode. And disc-play will start from the previously stopped portion of the song.
- During disc-play, if you resume to the radio mode, touch "R · M" once. The display will change to the radio mode and the radio will be heard.

NOTE: When the radio is at the SK/BK, DK reception, these six selectors are used for "BK" search tuning and for automatic presettings of up to six "VF" broadcast stations. Refer to Section IV "SK/BK, DK Reception" for more details.

First, set the radio to your favorite station by following the instruction on "Listening to the Radio" on page 8.



Press "PWR" on.

The "PWR" is always illuminated when the car's light switch is turned on (if the illuminator lead is connected to the car's power supply).

Volume/Bess/Treble/Belence/Feder Mode Selector
Everytime you press this portion the adjusting soquence mode will change as follows;

→ VOL → BASS → TRE → BAL → FADER →

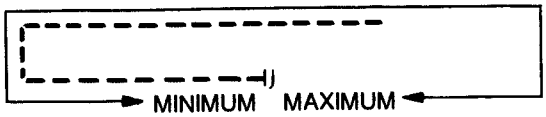
Each adjusting sequence mode (volume/bass/treble/balance/fader) can only be adjusted while it is blinking (within about 5 sec.). When it stops blinking, however, the adjusting sequence will always go back to volume level mode automatically.

1 VOLUME (▽/△)

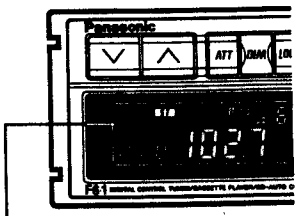
△ ← Pross to incroase sound.

▽ ← Press to decreaso sound.

The volume level indicators show;



The volume levels are shown only while the ▽ or △ is being pressed.



2 BASS (BASS)

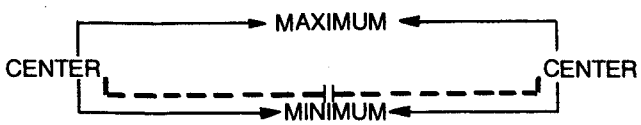
VOL BASS TRE BAL FADER ← ① Touch this portion once.

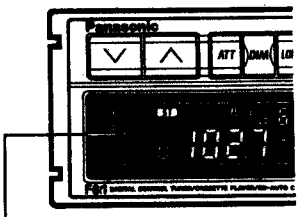
VOL BASS TRE BAL FADER ← ② "BASS" blinks 5 times.

△ ← ③ Press to increase bass sound.

▽ ← ④ Press to decrease bass sound.

The bass level indicators show;





3 TREBLE (TRE)

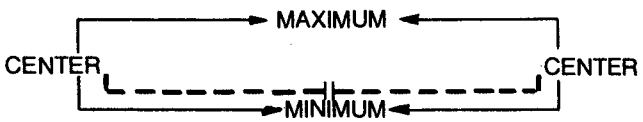
VOL BASS TRE BAL FADER ← ① Touch this portion twice.

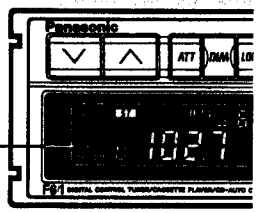
VOL BASS TRE BAL FADER ← ② "TRE" blinks 5 times.

△ ← ③ Press to increase treble sound.

▽ ← ④ Press to decrease treble sound.

The treble level indicators show;





4 BALANCE (BAL)

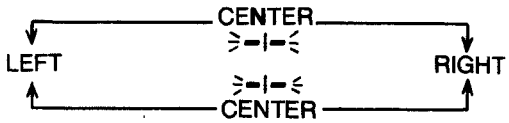
VOL BASS TRE BAL FADER ← ① Touch this portion three times.

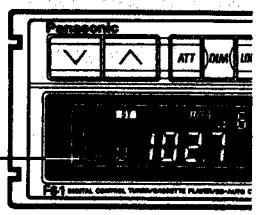
VOL BASS TRE BAL FADER ← ② "BAL" blinks 5 times.

← ③ Press to increase right sound.

← ④ Press to increase left sound.

The balance level indicators show;





NOTE:
If 2-speaker system is connected with this unit, only the front speakers will operate and the rear speakers will not.
In this case, set the fader at "front" position.

5 FADER (FADER)

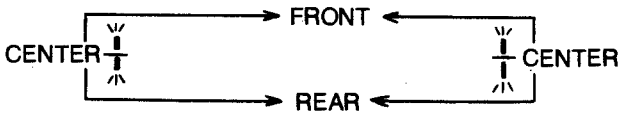
VOL BASS TRE BAL FADER ← ① Touch this portion four times.

VOL BASS TRE BAL FADER ← ② "FADER" blinks 5 times.

← ③ Touch to increase sound from front speakers.

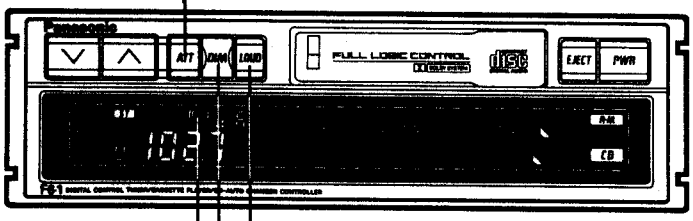
← ④ Touch to increase sound from rear speakers.

The fader level indicators show;



6 Attenuator Button (ATT)

The attenuator is used for reducing the volume instantly. Press "ATT" and the sound from the speakers will be cut to −20 dB level (about 1/10).
The attenuator will remain on until the "ATT" is pressed again.
To switch off, press "ATT" again. The sound will resume to its previous level.



"LOUB" Indicator

7 Loudness Control (LOUD)

This control is devised to compensate human hearing deficiency in high and low frequency regions when volume is low. Switch on the loudness when listening at low volume. The "LOUD" indicator shows on the LCD display. And when listening at high volume, switch off the loudness. The "LOUD" indicator goes off.

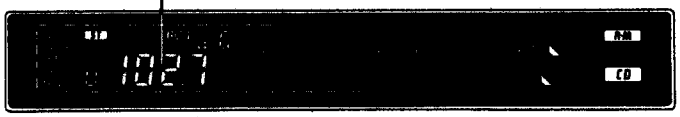
Dimmer Button (DIM)

Pressing "DIM" will shift the illumination from bright to dark, or vice-versa.
During nighttime, you may use the dimmer button to darken the illumination if it is too bright. However, once the "PWR" is switched off, the dimmer will go back to brighter illumination, when the "PWR" is switched on again.

Four kinds of dispisy modes srs esiectabie;

1 VOLUME LEVEL INDICATOR

Touch this portion.
Tho volume level indicators (including bass, treble, balance and fader level indicators) are displayed.
For details, refer to pages 10 and 11.

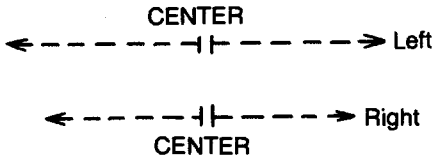


2 LEVEL INDICATOR A

Touch this portion again.
The level indicators are shown as follows;

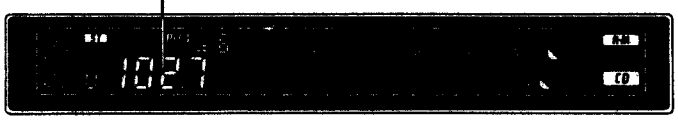
3 LEVEL INDICATOR B

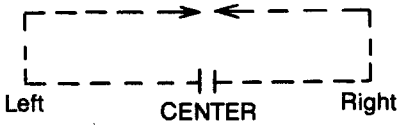
Touch this portion again.
The level indicators are shown as follows;



4 LEVEL INDICATOR C

Touch this portion again.
The level indicators are shown as follows;

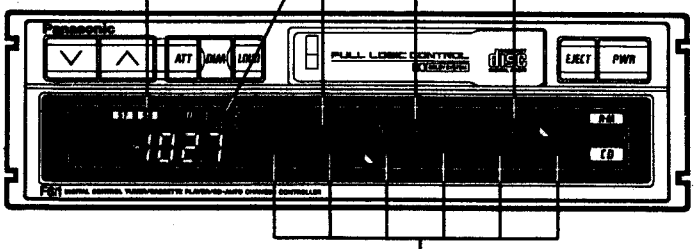




A. SK/BK RECEPTION

"SK" Indicator
Illuminates when the traffic-information broadcast station is tuned in.

"BK" Indicator
Illuminates when the "BK" is switched on.



1 **BK** (BK)
Touch "BK" for "VF" traffic-information broadcast reception.
The "DK" is shown.
NOTE: To cancel "VF" traffic-information broadcast touch the "LMU".

2 **"SK" search tuning**
Manual/Seek Tuning
Tune in the traffic-information broadcast station by seek tuning (or manual tuning).
When the traffic-information broadcast station is searched, it is indicated on the display panel (" BK A ", " BK B ", " BK C ", " BK D ", " BK E ", " BK F ").

3 **"BK" sssrch tuning**
Deeignsted "VF" Area Keys ("A"—"F")
The corresponding area key, wherein the traffic-information broadcast station is received, will be indicated on the display panel. For example, if the traffic-information broadcast station is in the "C" area key, the " BK C " will appear on the display. That station will automatically be memorized on the "C" key.

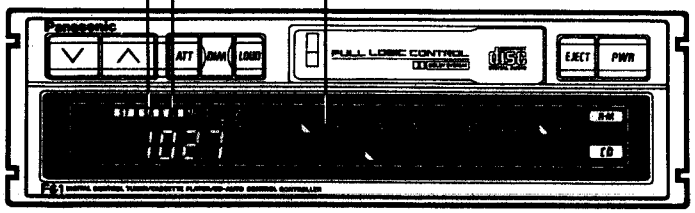
4 If you want to hear your desired Designated Area traffic-information, select that designated area and touch the corresponding designated area key. The "VF" traffic-information on that area will be automatically tuned in when that designated area key is touched **again.**
NOTE: When the "BK" broadcast station on that designated area key cannot be searched, the "SK" search tuning will automatically operate.

NOTES:
1. During tape play, if you want to listen to the "VF" traffic-information broadcast, simply touch the "R · M". Then touch the "BK".
2. Every time the traffic-information broadcast is "on air" the normal FM (UKW) radio program will temporarily be stopped.
3. If the traffic-information broadcasting station cannot be received due to weak signal when the desired designated "VF" area key (A ~ F) is touched, the "SK" indicator will not light up. In this case, touch that same area key again or select another "VF" station by seek tuning.

B. DK RECEPTION

"SK" Indicator
Illuminates when the traffic-information broadcast station is tuned in.

"DK" Indicator
Illuminates when the "DK" is switched on.



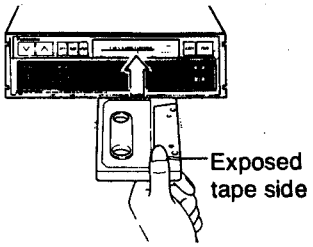
1 **DK** (DK)
Touch "DK". At on, the " ◣ " mark is shown. DK tuning is used for listening to "VF" traffic-information programs **only.** Other programs will be cut off. "DK" indicator illuminates when the "DK" is switched on. Touch "DK" again to switch off. The " ◣ " mark goes out.

NOTES:
1. During tape play, the "VF" broadcast station can **still** be heard automatically as long as the "BK" is switched on.
2. If you drive away from the tuned in "VF" broadcast station, the signal will become weak, and the "SK" indicator will go off. Then the "BK" search tuning will automatically operate. If the "BK" cannot be searched, the "SK" search tuning will automatically operate.
   (This explanation is also true during tape playback.)
3. When the "VF" traffic-information broadcast is "on air" during CD disc-play, the disc will still continue to rotate.
4. If manual tuning is operated, DK will **not** be available and the radio will switch to SK/BK mode unless the "DK" is switched on again.

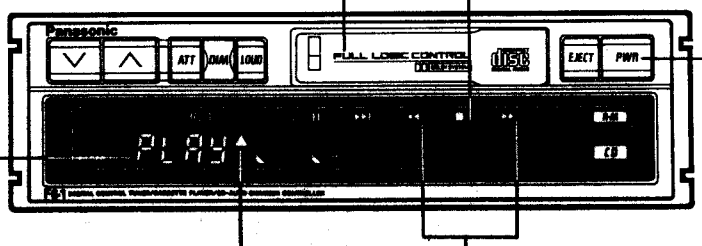
1 Press "PWR" on.

2 Cassette Slot

- Insert cassette with exposed tape side facing to the right. Push inward until the mechanism captures the cassette. Playback starts automatically when the cassette tape is inserted. The radio will come back on automatically when the cassette is ejected.
  NOTE: When the cassette tape is inserted the cassette door will close automatically. The tape direction indicator will show "▲" or "▼", indicating that a cassette tape is inserted inside.
- **Reel Rotation Detector**
  If the tape has a slack in the cassette, the reel rotation detector is activated to reverse the tape being played. When the tape is reversed "repeatedly", it is an indication that the tape may be defective.



4 Stop (■)
Touch "■" to stop fast forward or rewind operation.



"PLAY" Indicator

Tape Direction Indicator

3 Rawind/Faet Forward (◀◀/▶▶)
Make sure the "TPS" is not on. Otherwise, the TPS function will operate.

- Tcuch "▶▶" for fast forward. The level indicators move cleckwise. When the tape reaches its end, Auto Reverse will operate and play back the opposite side of the tape.
- Teuch "◀◀" for rewind. The level indicators move countercleckwise. When the tape is fully rewound, tape plays back again the same side of the tape.
- Te stop rewind/fast forward operation, touch "■". Then the tape play will resume from that pesition.

NOTES:
1. The "PLAY" blinks during rewind/fast forward operation.
2. If the "TPS" is switched on during rewind/fast forward operation, the tape will stop and starts playing the beginning of the nearest music program. See explanation of "TPS" on page 15.

5 Tape Program Selector (PRO)
Teuch "PRG" if you want to change the direction of tape play. The tape direction indicator "PLAY▲" or "PLAY▼" shows on the LCD display. Otherwise, tape direction will change automatically at the end of the tape (AUTO REVERSE system).

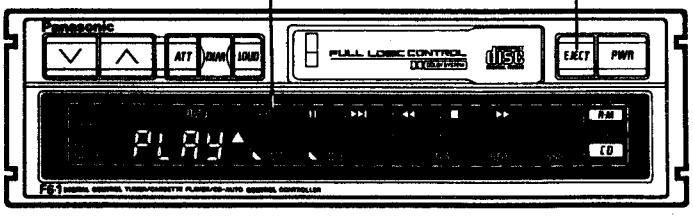
Tape Direction indicator (PLAY▲ or PLAY▼)
The tape direction indicator appears on the LCD display during tape mode operation.

PLAY▲ : Indicates the top side of the cassette is being played.
PLAY▼ : Indicates the bottom side of the cassette is being played.

NOTE: The "▲" or "▼" is always illuminated when the cassette tape is inserted (even if it is at radio mode or CD mode).

NOTE: However, when the "BK" is switched on, before or after the tape is inserted, the "VF" frequency appears on the display panel.

6 Eject (EJECT)
Press "EJECT" and the cassette will pop out for removal, and the radio will be heard again.
NOTES:
1. If power is switched off before the "EJECT" is pressed, the cassette will not eject. Switch on the power again and press the "EJECT" to eject the cassette.
2. The cassette tape should always be removed from the cassette slot when not in use.



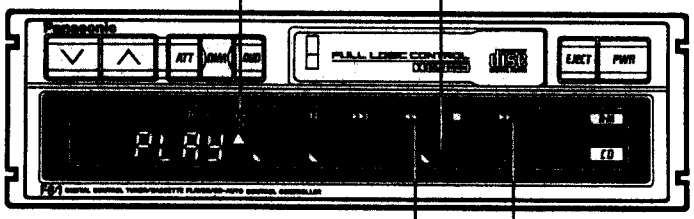
TPS Operetion (Tape Program Senaer)

1 Touch "TPS". At on, the " ◣ " mark is shown. Then touch "▶▶" or "◀◀" according to the numbers of the program (music) you want to select. The TPS will find the starting point of up to nine music programs in a prerecorded music tape. The quiet space between programs (must have at least a 4 sec. gap) can be sensed by the tape program sensor (TPS) circuit.

NOTE: Most commercially available music cassette tapes are suitable for TPS system.

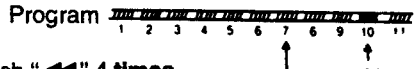
NOTES:
1. If the "TPS" is switched off at the middle of the TPS operation, the fast forward or rewind operation will instead operate. Read instruotion on "Rewind/Fast Forward" on page 14.
2. TPS system will only operate affer a lapse of about 1.5 seconds from the start of playback.

Tspes not suitable for TPS operation:
The TPS circuitry may not function properly for tapes described below, causing tapes to stop midway through a program or to over run the space between programs.
1. Tapes which contain intermittent sound program, such as conversations, lectures, news, pianissimo-featured classical music, or music that includes many silent or mute passages.
2. Tapes which have a very short time interval between recorded programs.
3. Tapes which have a high level of noise or hum between programs.



2 **Rewind TPS:**
Touch "◀◀" once to go back to the beginning of the song you are now listening to. Touch "◀◀" twice to go to the previous song. And so on, up to the ninth song before your present position (including the seng you are now listening to). The TPS music counter shows the number of program selected (0-0). Play begins automatically when the song is found.
■ To stop TPS function, touch "TPS". The " ◣ " mark goes out.

● Rewind TPS Operation:

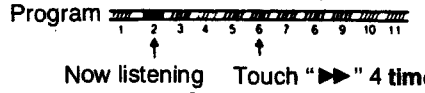


Touch "◀◀" 4 **times** if you want to listen to program 7. The TPS music counter shows " 3 ".

Now listening to program 10.

3 **Forwerd TPS:**
Touch "▶▶" once to go to the next song on your tape. Touch twice to go to the second song. And so on, up to the ninth song ahead of your present position. The TPS music counter shows the number of program selected (1-9). Play begins automatically when the song is found.
■ To stop TPS function, touch "TPS". The " ◣ " mark goes out.

■ Forward TPS Operation:



Now listening to program 2.

Touch "▶▶" 4 **times** if you want to listen to program 6. The TPS music counter shows " 4 ".

4 **To cancel TPS function:**
- To stop TPS function, touch "TPS". The " ◣ " mark goes out.
  If the "TPS" is switched off at the middle of the TPS operation, the fast forward (▶▶) or rewind (◀◀) operation will instead operate.
- Touch "■" to stop fast forward or rewind operation. Then the tape play will resume from that position.

Blank Skip (SKIP)
Touch "**SKIP**" to skip long, unrecorded portions on the tape. This is most convenient if you quickly want to skip the remaining unrecorded portions at the end of the tape and go fast forward to the beginning of the first music on the reverse side of the tape. At on, the " ◣ " mark is shown. However, the blank skip operation will not work if:

- The "**REP**" is on. The repeat function has priority over that of the blank skip function.

Repeat (REP)
Touch "REP" to repeat the same music you are now listening to.

- Touch "**REP**". At on, the " ◣ " mark is shown. After finishing the music just listened to, the rewind starts automatically until the beginning of music, and the same music starts playing again.
  When you want to cancel repeat operation, touch "**REP**" again. The " ◣ " mark goes out.

In the following conditions, REPEAT may not perform properly when:

- The blank space between recorded programs is less than 4 seconds.
- The cassette tape has an interrupting conversation recording. (There may be more than 4 sec. blank space in that portion of the tape.)
- There is a portion of the tape where the sound level is particularly low or there is no sound.
- The remaining playing time of a song is less than 10 sec. preceding the beginning of the next song before the REPEAT function is turned on.

Pauae (II)
Touch " II " to stop tape play temperarily. At on, the " ◣ " mark is shown.
Touch again to resume tape play. The " ◣ " mark goes out.

Tape Scan (▶▶|)
Touch "▶▶|". At on, the " ◣ " mark is shown. The level indicators move clockwise. During tape scan operation, the " PLAY " indicator blinks and every song from next song on same side of the cassette tape you are listening to is scanned for several seconds. When you hear the desired music and you want to keep it, touch "▶▶|". Tape playback will resume from that position. The " ◣ " mark goes out.
NOTE: When scan operation reaches at the end of the tape, the tape scan operation will stop. The tape direction will change and tape playback will resume from the opposite side automatically. The " ◣ " mark goes off.

In the following conditions, SCAN may not perform properly when:

- The blank space between recorded programs is less than 4 seconds.
- When the blank space between the lead-in tape and the first music is less than 10 sec. (after auto-reverse had operated). It will, however, start working regularly from following second music and so on.

Radio Monitor (R · M)
During tape playback, if you want to listen to the radio momentarily, simply touch the "R · M". Tape playback will stop (pause mode) and the radio can be heard. The LCD display shows the radio frequency. To resume tape playback, touch the "R · M" again.
NOTE: At "radio monitor" mode, tuning in to another radio station can be made.

Metal Tape Salector (MTL)
Touoh "MTL" for playing metal or CrO_2 tape. At on, the " ◣ " mark is shown. Switch off for playing normal tape. The " ◣ " mark goes off.
NOTE: This switch serves as an equalizer for reproduction of tape recorded using Metal or CrO_2 tape with 70μs equalization, or tape recorded using "normal" tape with 120μs equalization. Wrong setting will cause high frequency imbalance.

CB Switch (CD) (Option)
Change to tha disc-play
- During tape playback, if you change to the disc-play, simply touch the "CD".
  The display will change to the CD mode. And disc-play will start frcm the previously stopped portion of the song.
- During disc-play, if you resume to the tape mode, touch "R · M" twice. The display will change to the tape mode and the tape playback will be heard (if the cassette is inserted).

Dolby "B" Noise Reduction (DOLBY B)
Touch "DOLBY B" for playback of the tape recorded by the Dolby "B" Noise Reduction System. At on, the " ◣ " mark is shown.
Touch "DOLBY B" (the " ◣ " mark goes out) to cancel Dolby "B" for playback of tape not recorded by the Dolby Noise Reduction System "B". Cassette tapes not recordod with Dolby NR do not benefit from use of Dolby NR during playback. Using the Dolby NR System on tapes not encoded with Dolby NR causes high frequency imbalance.
NOTE: The Dolby NR circuit will not operate in radio mode.

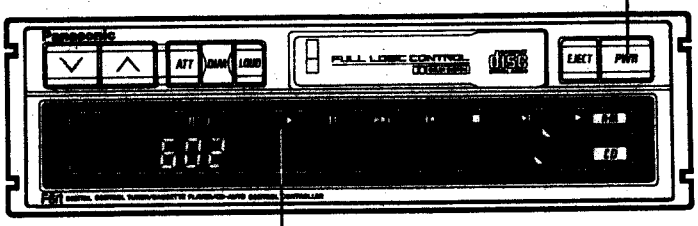
Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DOLBY are trademarks of Dolby Laboratories Licensing Corporation.

Operation of Compact Disc (Optional)

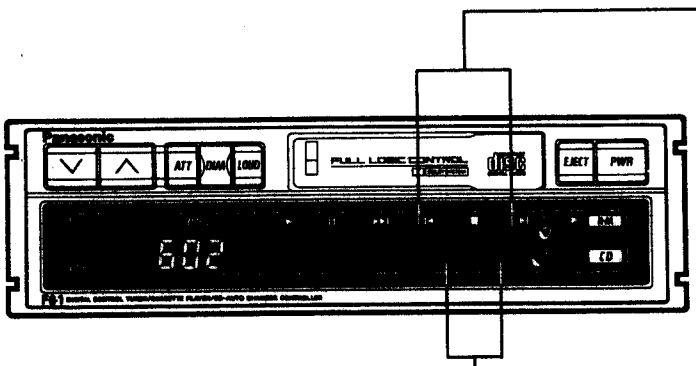
★ **To operato CD playor, an optional CD Changor (Model CX-DP11EN) muat he used and purchesed separately. When a CD Chenger la not connected, if you touch the "CD", the dlaplay will not change to tha CD mode.**

1 Press "PWR" on.

2 Sot the Disc Magazine of the optional CD Changer
For setting the Disc Magazine, please refer to the manual of the CD changer.



3 **Play (▶)**
Start the dlac-play.
- After setting the disc magazine, touch the "▶" and the disc-play will start from the first track of disc 1.



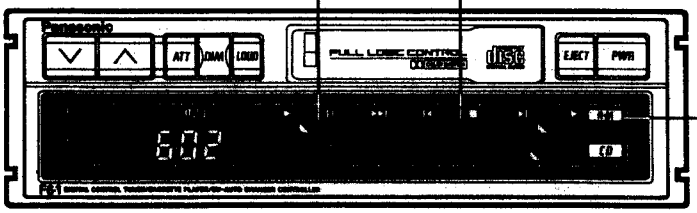
4 **Dlac Selectora** (DISC ∨ /DISC ∧)
Select the dlec-play.
1. Touch "DISC ∨ " or "DISC ∧ " during disc-play to select the desired disc. The disc indicator " 1-01 ~ 12-01" and the " LOAd" indicator will blink alternately until the disc is selected.
   The first track of the selected disc will start to play.
2. The "DISC ∨ " or "DISC ∨ ", if operated, has priority over that of "RANDOM" or "MEMO ▶" mode. The "RANDOM" or "MEMO ▶" mode will stop and the disc select function will operate once "DISC∧ " or "DISC∨" is touched.

If the disc magazine has an empty slot or slots (no disc inserted), that particular slot would be bypassed automatically. The next succeeding slot, having disc in it, would be selected.

5 **Track Selectors (⏮/⏭)**
Select tho desired track (mualc).
1. During disc-play, touch the "⏮" or "⏭" to select track. The "⏮" selects track backward, and the "⏭" selects track forward.
2. Touching the "⏭" once will play the beginning of the next music.
   Touching the "⏮" once will replay the beginning of the music just listened to.
   Touching the "⏮" twice will go back to the beginning of the previous music.
3. During "MEMO ▶" mode, only the memorized tracks (musics) can be selected in sequence everytime the "⏮" or "⏭" is touched. Please refer to page 20.
4. During random mode, the random-access music can be selected in sequence everytime the "⏮" or "⏭" is touched.

6 Pause (II)
To interrupt disc-play temporarily.
1. Touch " II " to stop disc-play temporarily. The " ◣ " mark is shown.
   Touch the " II " again to resume disc-play. The " ◣ " mark goes out.
2. Pause operation will not function when the " LOAd " or " dISC " indicator is blinking on the LCD display.
3. The " II " is also used for memory function.

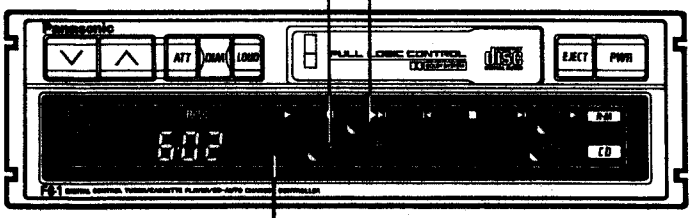
7 Stop (■)
To atop tho diac-play.
1. During disc-play, touch "■" to stop the disc-play.
2. To re-start the disc-play, touch either "MEMO ▶" or "▶". Disc-play will continue from the previously stopped portion of the music (if there is no memory).



Radio Monitor (R · M)
To reaume the radio or the tape playback.
- During disc-play, if you resume to the radio mode, touch "R · M" once. The display will change to the radio mode and the radio will be heard.
- During disc-play, if you resume to the tape mode, touch "R · M" twice. The display will change to the tape mode and the tape playback will be heard (if the cassette is inserted.).

NOTE: During disc-play, if you insert cassette tape, the display will change to the tape mode and tape playback will start automatically.

Random (RANDOM)
CD changer selects muaic at random automatically.
- The random circuit permits access to music on the discs in any ordor, having randomly varying selection.
- Touch "RANDOM" and the " ◣ " mark is shown. The unit will start to select music in any order at random.
  During the random mode, the " LOAd " indicator and disc/track number will blink alternately while the disc/track is being searched, until the disc is ready to play.
- The random disc-play mode will stop when "▶", "MEMO ▶", "■", "DISC ∨ " or "DISC ∧ " is touched. The " ◣ " mark goes out.
- Touching the "⏮" or "⏭" will also change the track during random mode.



Scan (⏭)
- Touching "⏭" gives you a 10-second preview of each song on the disc.
  The LCD display will show as follow;
- disc/track display
- time counter display

1 · 10	1 · 10	0 · 01
Blinking	Blinks several times	The left-side will blink ten times.

■ When the desired song is reached and you want to keep it, touch "⏭" or "▶". The scan operation will stop and disc-play starts from that position.

■ During "MEMO ▶" mode, only the programmed songs can be scanned one by one.
■ Scan will not operate at RANDOM mode.

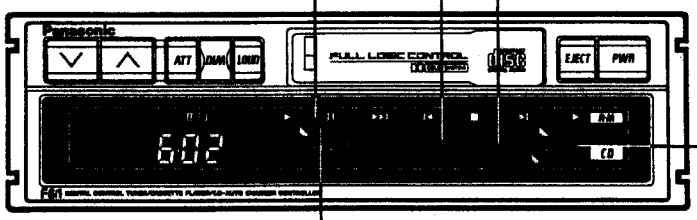
Display Selector (DISP)
To check the program playing time.
- Touch "DISP" to select display modes, either time counter or disc/track numbers.

To Momorizo Track Numbera (favorite aong).

Memory (MEMO)

- Up to 35 tracks (songs) can be preset "randomly" into the built-in electronic memory circuit.

1 Touch " ⏸ ". The " ◣ " mark is shown. (Touch " ⏸ " when at "play" mode.)



2 Select the song to he memorized by "DISC ∨ " or "DISC ∧ " and "⏮" or "⏭". The selected disc/track number is shown on the LCD display.

3 Then touch "MEMO". The LCD display will blink once, and the " ◣ " mark is shown on the "MEMO" key. Memory is now set.

4 After all the desired songs are memorized, touch the " ⏸ " again. The " ◣ " mark goes out.
The " ◣ " mark is shown on the "MEMO ▶" key and disc-play will start automatically from the first memorized song.
To stop memory play, touch either one of the following keys; "▶", "■", "RANDOM" "DISC ∨ " or "DISC ∧ ". However, memory will still remain in the circuit and, thus, the " ◣ " mark remains on the "MEMO" key.

NOTE:
Repeat steps 2 and 3 to memorize other tracks. A total of 35 tracks (songs) can he memorized. When the memory capacity is full, the " FULL " indicator lights up.

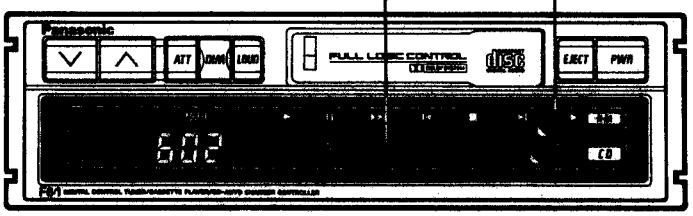
How to Csncel Memory Mode:
Touch the "MEMO" for more than 2 seconds to erase all the memorized tracks while in disc-play mode or until the " ◣ " mark goes out.
★ Memory can not be erased during PAUSE mode.

Recall (RECALL)
To oonfirm programmed songs.

- Touching "RECALL" will let you recall all the programmed track numbers. They are shown on the LCD display one by one.
- After all the programmed tracks are displayed, the LCD display will return to the normal display (before the "RECALL" was touched).

5 **Memory-Plsy** (MEMO ▶)
Playback of progremmed songs.

- Memory-play can be played back by touching "MEMO ▶" as long as the " ◣ " mark is shown. Memory-play will start from the first programmed song and so on.
- Touching any one of these keys, "▶", "■", "RANDOM", "DISC ∨ " or "DISC ∧ " will stop the memory-play mode.



VI Notes on Proper Use (Wireless Remote Control)

- The Wireless Remote Controller is a light-weight, compact unit. Handle it with care. Do not drop or hit it.
- Do not place it in the hip pocket and in areas of high temperature, high humidity, direct sunlight, or a dusty atmosphere for a long time. Excessive exposure to these conditions could result in poor performance, damage to the cabinet, or functional failure of the unit or other component.
- Use a soft cloth to wipe the surfaces. To remove extremely dirty portions, use a seft cloth slightly soaked with water. Never use benzine, thinner or any other type of selvents.
- Do not expose to physical shock or any liquids in order to maintain good performance.
- The temperature inside the car may become very high (especially during summer). It is advisable to drive the car and give the interior a chance to cool down before operating the unit.
- Do not place the unit in the glove compartment or on the rear panel tray of the car.

Preparation

- Before using the wireless remote controller, please read this operating instructions manual completely.
- Insert two R03 (UM-4) batteries.

CAUTION: Please refer to page 24 for detailed instructions on how to insert batteries.

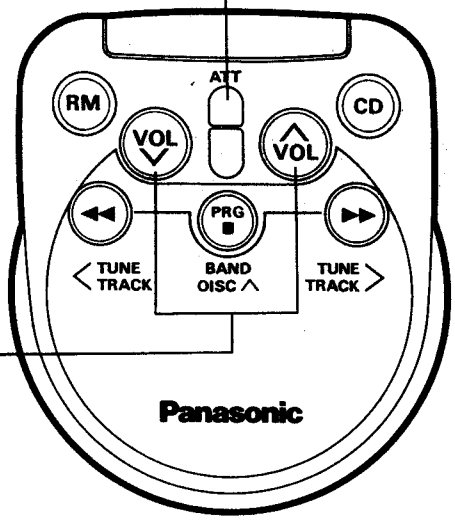
VII Operation of Wireless Remote Control

- Hold the Wireless Remote Controller and aim it toward the main unit.
- Take proper care and observe correct order of operating sequence when using the wireless remote controller.

Main Controls

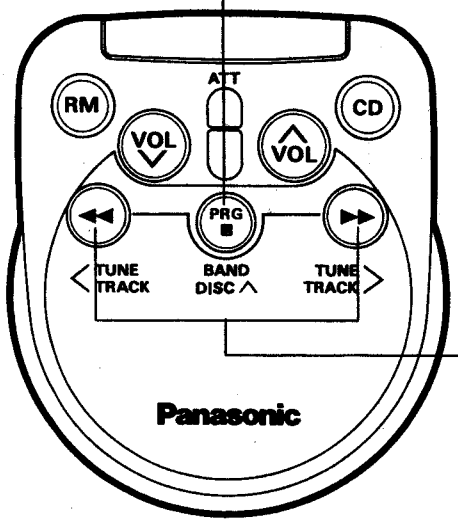
Adjust ths volume (VOL▽ / VOL△)
Press "VOL△" to increase the volume and press "VOL▽" to decrease the volume.

To lower the sound instantly (ATT)
Press "ATT" and the sound from the speakers will be cut to −20dB level (about 1/10). To switch off, press "ATT" again. The sound will resume to its previous level.



Radio Controls

Band Selection. (BAND)
Each time you press the "BAND", the band will be selected. The radio frequency appears on the display panel of the main unit.



Rsdio Reception (TUNE ◀◀ / TUNE ▶▶)
Press "▶▶" for tuning to higher frequency.
Press "◀◀" for tuning to lower frequency.

Seek Tuning (TUNE ◀◀ / TUNE ▶▶)
Press "◀◀" or "▶▶" and hold it for half a second. Seek tuning will operate and will stop on the next station.
NOTE: To find the next station repeat this operation again and so on until the desired station is reached.

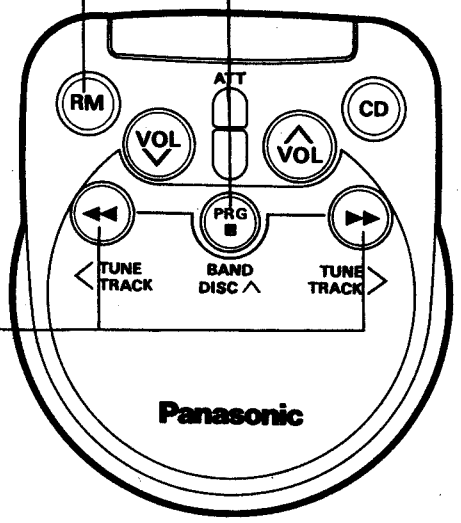
Cassette Controls

Radio Monitor (RM)
During tape playback, if you want to listen to the radio momentarily, simply press the "RM". Tape playback will stop (pause mode) and the radio can be heard. The LCD display shows the radio frequency. To resume tape playback, press the "RM" again.

To Stop Rewind or Fast Forward Operation (M)
Press "M" to stop fast forward or rewind operation.

Tspe Program Selector (PRG)
During tape playback, if you want to change the direction of tape play, press "PRG". Otherwise, tape direction will change automatically at the end of the tape (AUTO REVERSE system).

Rewind/Fast Forwsrd (◀◀/▶▶)
Press "▶▶" for fast forward.
Press "◀◀" for rewind.
To stop rewind or fast forward operation, prese "M". Then the tape play will resume from that position.
NOTE: Make sure the "TPS" is not on. Otherwise, the TPS function will operate.



CD Controls (Option)

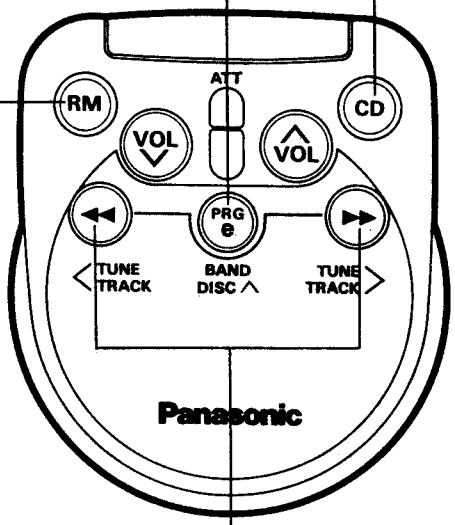
★ **To oparate CD player, an optional CD Chenger (Model CX-DP11EN) muat he used and purchased separately.**
When a CD Changer la not connectad, the display will not change to the CD mode evan it you prese "CD".

Solect the disc-play. (DISC ∧)
Press "DISC ∧ " during disc-play to select the desired disc.
The first track of the selected disc will start to play.

If the disc magazine has an empty slot or slots (no disc inserted), that particular slot would be bypassed automatically. The next succoeding slot, having disc in it, would be selected.

Change to the disc-play. (CD)
During tape play back or radio, if you change to the disc-play, simply press the "CD". The display will change to the CD mode. And disc-play will start from the previously stopped portion of the song.
NOTE: However, after setting the disc magazine into the CD chenger (CX-DP11EN), the disc-play will not oparate through this remote control. The play "▶" on the main unit ahould he touchad.

To Resume the Radio or Tapa Playbsck (RM)
During disc-play, if you resume to the radio mode, press "RM" once. The display will change to the radio mode and the radio will be heard. During disc-play, if you resume to the tape mode, press "RM" twice. The display will change to the tape mode and the tape playback will be heard (if the cassette is inserted).
NOTE: During disc-play, if you insert cassette tape, the display will change to the tape mode, and tape playback will start automatically.



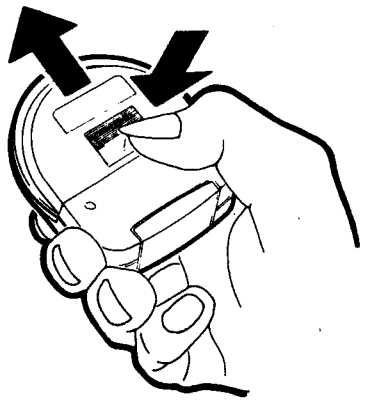
Select the Desirad Track (Music).
(◀◀ / ▶▶)
During disc-play, press the "◀◀" or "▶▶" to select track.
The "◀◀" selects track backward, and the "▶▶" selects track forward.
Pressing the "▶▶" once will play the beginning of the next music.
Pressing the "◀◀" once will replay the beginning of the music just listened to.
Pressing the "◀◀" twice will go back to the beginning of the previous music.

Battery Replacement

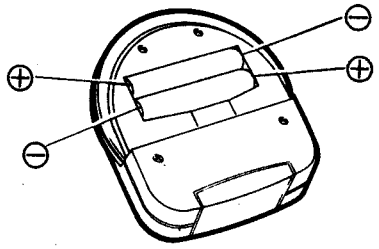
Use two R03 (UM-4) regular batteries.
The life of the battery is good for about 6 months (at normal temperature).

How to Insert Battarias

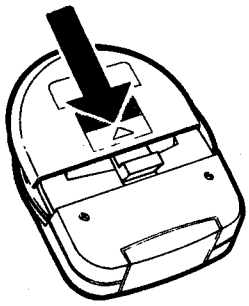
1 Remove the cover by pushing the cover gently and slide it outward.



2 Replace the batteries. Observe correct polarity ⊕ and ⊖ inside the battery compartment.



3 Replace the cover. Slide the cover inward proportionately until a click is heard.



Notos on Batteries

Impropar use of battarias may causa laakaga and tha Wireless Romota Controller will got damage. Plaasa obsarva tha following notas to obtain proper parformance.

- Replace the old batteries with new ones. Do not use old and new batteries together.
- Do not use different kinds of batteries. For example, do not use regular battery and "Alkaline" battery together.
- Old batteries should be thrown out immediately.
- Observe correct polarity ⊕ and ⊖ of the battery. Refer to ⊕ and ⊖ indication on the bettery compartment.
- Do not disassemble or short the batteries. Do not throw batteries into the fireplace.

CAUTION:
Never use batteries, such as Ni-cd having different size, shape or function as compared to standard batteries.

How to Fix the Magic Tape

CAUTION :
PUT THE WIRELESS REMOTE CONTROLLER TO A CONVENIENT LOCATION (AWAY FROM DIRECT SUNLIGHT) BY USING THE MAGIC TAPE (SUPPLIED).

Display Conditions

DISPLAY	DESCRIPTION
LOAd	Shown during loading of disc magazine into the CD changer unit, or during disc selection.
d ISC	Shown when the first disc is to be played after the disc magazine is loaded.
FULL	Shown when the memory is full. Up to 35 tracks can be memorized.
150F	Shown when the temperature rises for more than 140°F (60°C). Sometimes, it disappears when play button is pressed but it will reappear. In this case, wait for a while before using the unit.

Error Display

DISPLAY	DESCRIPTION
E 1	Blinks when the compact disc is dirty or when it is inverted.
E 2	Blinks when the compact disc has a scratch on it.
E 3	Shown when the unit stops to operate for some reason. Press the eject button on the CD changer unit. If it will not eject and the " E 3 " reappears, there should be something wrong. Contact immediately your nearest authorized dealer.
0000	Shown when there is no disc on the disc magazine.
No sound and no display when play button is pressed.	Shown when the disc magazine is not leveled horizontally when loaded.

Prior to operating this unit, it is advisable to assign your 4-digit sscret personal codes and register thom into the electronic memory circuit on this unit. Refer to "HOW TO REGISTER YOUR SECRET PERSONAL CODES". The codes you will register into the memory **should not be forgotten**.
Tho unit can not be operated (after the main power supply is disconnected), since it is electronically locked up so that the thief could not use the stolen unit unless that person knows the codes you have registered.

NOTICE

A "REMINDER CARD" is enclosed with this unlt. **Please** write your secret code numbers into this reminder card, and keep it with you at all times. NEVER LEAVE THE CARD INSIDE THE CAR.

HOW TO REOISTER YOUR SECRET PERSONAL CODES

This section can be operated only at rsdio mode (L/M/U/).

STEP	OPERATION	DISPLAY MODE
1	Press the "PWR" to switch the power to the unit on. The display panel shows the radio frequency.	102.7
2	Touch "CODE" for more than 2 seconds.	After 2 sec. 0000 appears. CodE → 0000
3	Register your secret personal codes by touching any of the preset station selectors "A", "B", "C" and "D". (The "E" and "F" wlll not work.) NOTE: Any 4-digit combination (0-9) codes can be rogistered (oxcept "0000"). If "0000" codes are assigned, the display will show arror " Err " mark.	For ex.; 1234 ← Your secret personal codes shown on the display DO NOT FOROET YOUR SECRET PERSONAL CODESIII Touch → A (one time) B (two times) C (three times) D (four times) PRESET STATION SELECTORS
4	Tc momorized the codes, touch "CODE" again for more than 2 seconds. Ncw your secret personal codes are registered into the memory circuit.	After 2 sec., the radio frequency appears. SAF → 102.7

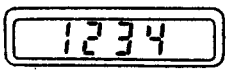
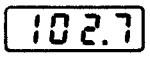
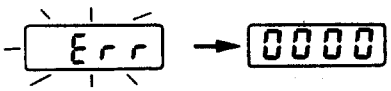
HOW TO ERASE MEMORIZED SECRET PERSONAL CODES

This sectien can be operated only st radio mode.
NOTE: Should your unit ever require service, cancel your secret personal code before sending it for repair.

STEP	OPERATION	DISPLAY MODE
1	Touch "CODE" for more than 2 seconds.	After 2 sec., 0000 appears. SAF → 0000
2	Register your secret personal codes by touching the correspending preset station selectors ("A", "B", "C" and "D").	For ex.; 1234 Your secret personal codes
3	Touch "CODE" for more than 2 seconds.	1234 → 0000 Now the secret personal codes are erased. You may register your new codes, if necessery.
	NOTE: If the codes are incorrect the display shows error mark. Please check your codes and repeat steps 1-3 again.	After 2 sec., the radio frequency appears. Err → 102.7

HOW TO DECODE YOUR SECRET PERSONAL CODES

This section describes how to decode your secret personal codes (previously registered) so that operation of the unit can be possible after the main power supply has been disconnected and reconnected (i.e. after car battery replacement, etc.)

STEP	OPERATION	DISPLAY MODE
1	Reconnect the main power supply and press the "PWR".	Unit; completely inoperative
2	Touch "CODE" for more than 2 seconds.	
3	Register your secret personal codes by pressing the corresponding preset station selectors ("A" - "D").	For ex.;  Your secret personal codes
4	Touch "CODE" for more than 2 seconds.	 Radio frequency appears. Unit; operative
	NOTE: If the codes are incorrect, the display shows; Please check your codes and repeat steps 2-4 again.	Blinks 5 times.  Unit; completely inoperative
5	Now your unit can be operated.	**If you have forgotten your secret personal codes, the unit is completoly inoperative. In this case, please bring the unit together with the warranty card to the nearest service center. However, you will be cherged for decoding the secret code.**

Notea on Caaaette Tape

To obtain optimum performance from your unit, these heipful hints shouid be remembered:

• We strongly recommend not using tapes longer than C-90 (90 minutes), uniess absolutely necessary.

• Before use, check the cassette for tape siack. (Such as shown by arrow 1.) Use a pencli, or similar object, to remove the slack by rotating the hub, as shown by arrow 2. (Fig. 1)

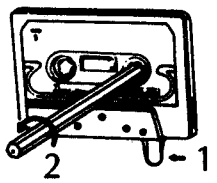


Fig. 1

• in tho event that the cassette iabel starts to peei off, be sure to take it off completely, or repaste it before inserting the cassette into the unit.

• Avoid touchlng or soiling the tape surfaces.

• Keep the caseette away from magnetized objects (motor, speaker, transformer, etc.).

• Avoid placing the cassette in direct sunlight or near a heated object. Heat has an adverse effect on the tape.

• Whon storing the cassette, keep it in a case, with the openings (exposed tape side) facing down, in order to prevent dust from entering the cassette.

• Keep ths cassette in a ccol, dry place.

Maintenance

Tape Head Cleaning

To obtain optimum performance, clean the tape head as often as necessary, depending upon frequency of use and tape cieanliness.
The tape head in the cassette car stereo mechanism can accumuiate dust and tape residue, causing poor or wavering sound.

To clean the tape head, uae a commercially available head cleaning tape.

- **EXTERIOR CLEANINO**

A. To clean tha front transparent plastic, use the LENS CLEANER supplied with this unit. Do not use hard cloth and any rough materials.
B. To clean the exterior of this unit (escutcheon and chassis), use a soft cloth to wipe the surface. Do not use benzine, thinner, or any other type of solvent.

Basic Noiae Suppression Methoda

Proper grounding is one of the most importent items.
The contact of the tapping eorewe only is not sufficient. Remove the peint under the holder of the capacitor and apply contact grease. The noise suppression can then be performed as foilows:

1. Ignition Coil (Fig. 2)

The ignition coil has to be provided with a 2.2 μF paraiiel capacitor at the terminal (+). If the ignition coil is attached to the car body (e.g. cowling), the capacitor has to be connected to the engine block by means of a short grounding bend.

2. Alternator (Fig. 3)

Connect a 2.2 μF paraiiel capacitor to the terminal "S+". The attachment lug of the capacitor should be connected with the aiternator case.

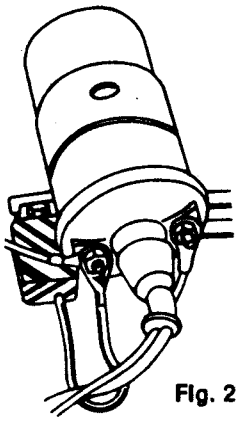


Fig. 2

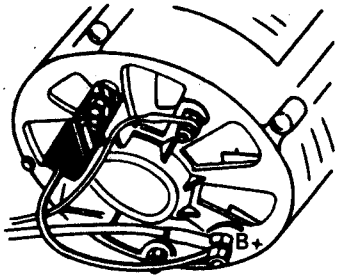


Fig. 3

3. Engine Hood (Fig. 4)

A grounding bend has to be connected between the engine hood and the car body. Bemove the paint under the gounding band compietely. The grounding band is used to avoid interferences (engine noise) that are transferred from the engine compertment via the antenna into the radio.

4. Diatributor (Fig. 5)

Put a noise-suppression resistor (1 to 10kΩ) between the center jack of the distributor and its plug.

If the above besic noise suppression methods are performed correctly, but stili interferences are audible, please contact your nearest service station.

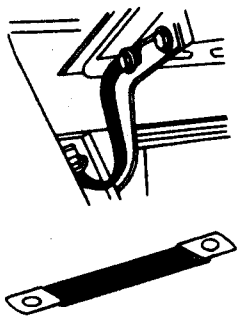


Fig. 4

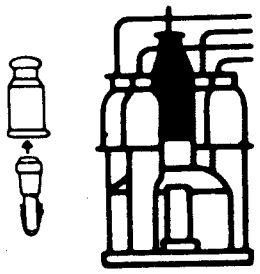


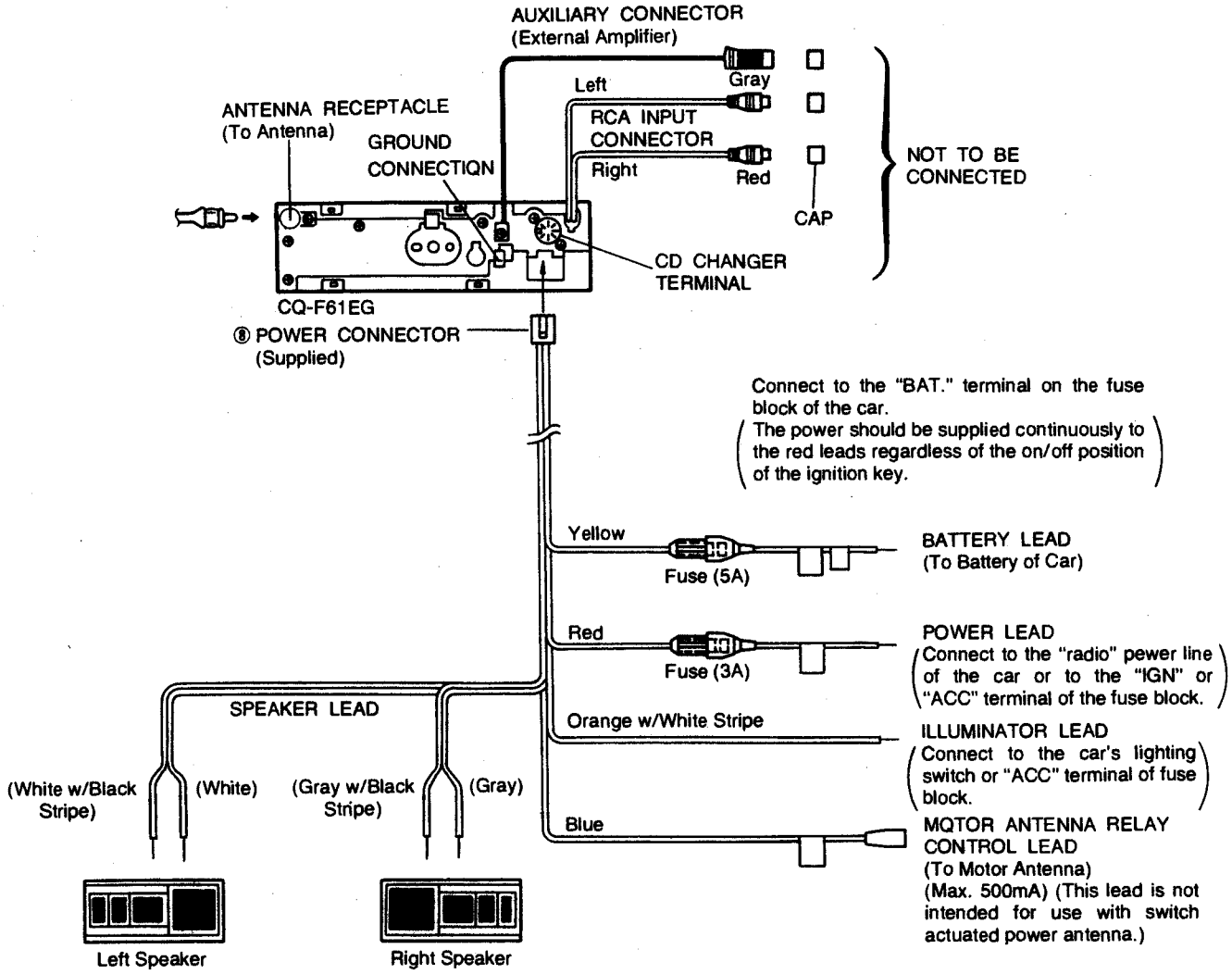
Fig. 5

Before connecting:

- **Disconnect the negative side of the battery to prevent short-circuit during wiring.**
- **For wiring connection, please refer to each auxiliary equipment's instruction manual.**

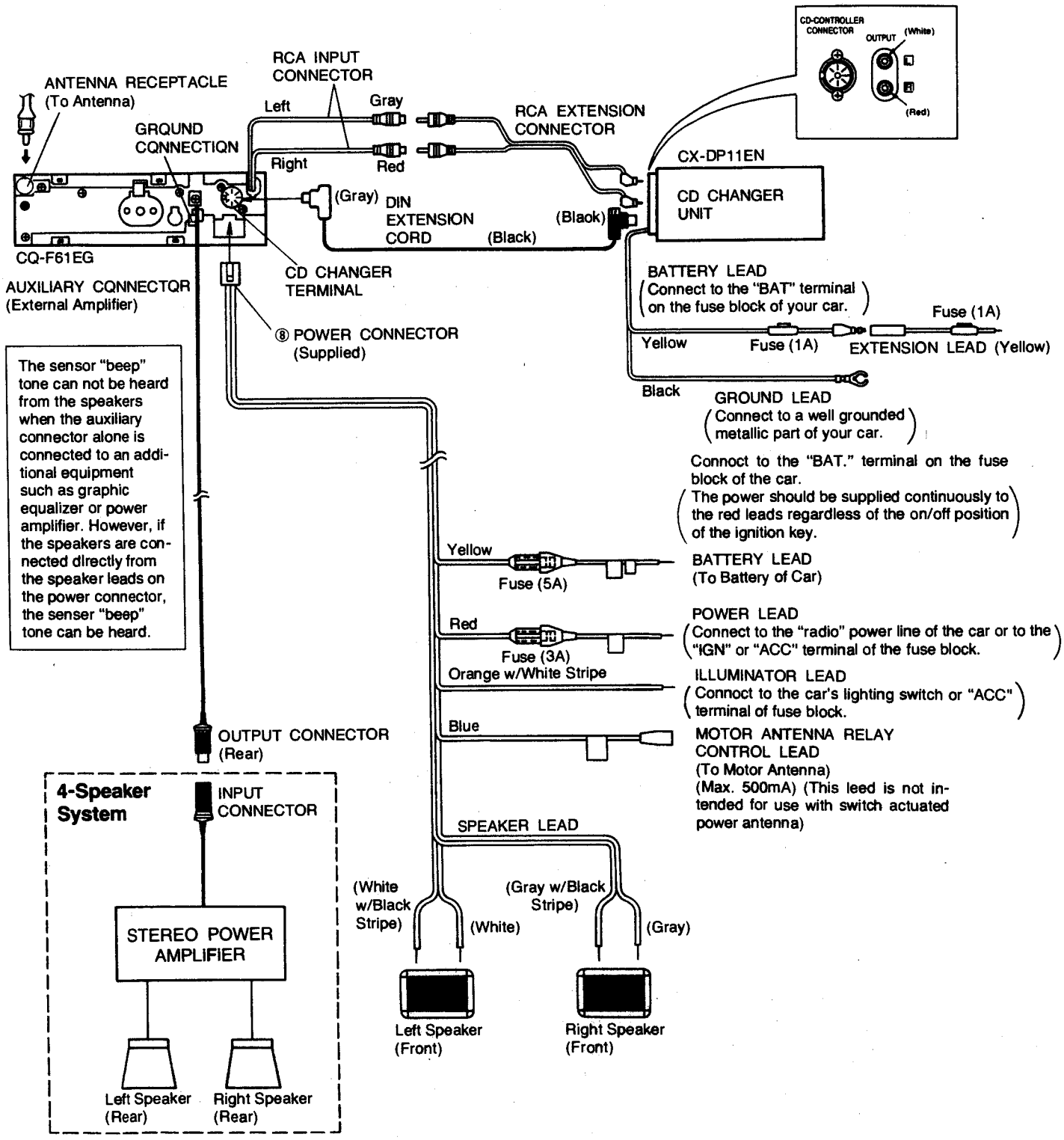
CAUTION	Although the color of all negative speaker wires are with BLACK stripes they are not connected at the same common point internally. They work respectively with their positive pair, and the pairs of spoaker wires are adhered together. Therefore, do not split the speaker wire pairs beyond the manufacture's setting unless you can recognize their positions.

2-SPEAKER SYSTEM



IN COMBINATION WITH A CD CNANOER (CX-DP11EN)

- **This unit csn be connected to sn optional CD changsr (CX-DP11EN). For detalls, consult your nasrest dealer.**
- **For connection to s CD changer, refar to the operating instructions of the CD changer (CX-DP11EN).**


CD-CONTROLLER CONNECTOR
OUTPUT
(White)
(Red)
ANTENNA RECEPTACLE
(To Antenna)
GRQUND CQNNECTIQN
RCA INPUT CONNECTOR
Left
Gray
Right
Red
RCA EXTENSION CONNECTOR
CX-DP11EN
CD CHANGER UNIT
(Gray)
DIN EXTENSION CORD
(Black)
(Black)
CQ-F61EG
AUXILIARY CQNNECTQR (External Amplifier)
CD CHANGER TERMINAL
⑧ POWER CONNECTOR (Supplied)
BATTERY LEAD
(Connect to the "BAT" terminal on the fuse block of your car.)
Fuse (1A)
Yellow
Fuse (1A)
EXTENSION LEAD (Yellow)
Black
GROUND LEAD
(Connect to a well grounded metallic part of your car.)
The sensor "beep" tone can not be heard from the speakers when the auxiliary connector alone is connected to an additional equipment such as graphic equalizer or power amplifier. However, if the speakers are connected dlrectly from the speaker leads on the power connector, the senser "beep" tone can be heard.
Connoct to the "BAT." terminal on the fuse block of the car.
(The power should be supplied continuously to the red leads regardless of the on/off position of the ignition key.)
Yellow
Fuse (5A)
BATTERY LEAD
(To Battery of Car)
Red
Fuse (3A)
POWER LEAD
(Connect to the "radio" power line of the car or to the "IGN" or "ACC" terminal of the fuse block.)
Orange w/White Stripe
ILLUMINATOR LEAD
(Connect to the car's lighting switch or "ACC" terminal of fuse block.)
Blue
MOTOR ANTENNA RELAY CONTROL LEAD
(To Motor Antenna)
(Max. 500mA) (This leed is not intended for use with switch actuated power antenna)
OUTPUT CONNECTOR
(Rear)
4-Speaker System
INPUT CONNECTOR
SPEAKER LEAD
STEREO POWER AMPLIFIER
(White w/Black Stripe)
(White)
(Gray w/Black Stripe)
(Gray)
Left Speaker (Front)
Right Speaker (Front)
Left Speaker (Rear)
Right Speaker (Rear)

Fuss

Be sure to use a fuse of specified rating (3A · 5A) when replacing a blown fuse.
Fusea rated at higher capacity, use of any aubatitute, or connection without a fuae may result in a fire hazard or damage to the uhit.
If the replacement fuae falls, contact your nearest authorized Panasonic Sarvice Center.

CAUTION:
1. Connect the BATTERY LEAD (yellow) direct to the battery. Otharwiae, memory aettinga cannot be done.
2. If battery connection la diaconnected (auch as during battery replacement, recbarging the battery, etc.), all electronic settinga previoualy done on thia unit would fade out. To reset, follow previous 'inatructiona on this Operating Inatructiona.

IF THE RADIO RECEPTION IS NOT OBTAINED SATISFACTORILY, THERE IS A POSSIBILITY THAT THE ANTENNA CONNECTION WAS NOT DONE PROPERLY. CHECK THE ANTENNA CONNECTION AND ITS INSTALLATION BEFORE BRINGING TNE UNIT TO A REPAIR SHOP.

Instsllation Hints

Please obcerve the following hints, in order to obtain fine and ciser reception.

Antenna:

The antenna should ba mounted at the side of the car opposite to the ignition coil. The antenna holder must ba properly grounded, that is the inside of the fender around the hole for the antonna haa to ba frse of paint and anti-corrosive. After cleaning the inside of the fender around abeve hole apply water-realatant contact spray or contact grease. The antenna should ba installed with some inclination (if possible), in order to obtain fine FM reception.

Radio:

Tha unit must have good contact with the car body. If required, attach a ground band or a ground wire (4 to 6mm²) betwsen tha caae of tho unit and the car body. The screws should not ba mounted into the set for more than 8mm, because otherwise a short circuit may eccur and the car radio may ba damaged. The power supply should come from the proper terminal of the ignition switch (refer to operating inatructions of the car) or from a direct plus terminal (fuse bleck, cigarette lighter).

NOTE: The antenna trimmer adjuatment is not necessary for this unit.

Installation Procedures

NOTES:

- Befora installation check the radio operation with antenna and speakers.
- Disconnact the cable from the negative (−) battery terminal.

UNIT IN-DASH INSTALLATION

Installetion Openlng

In-dash installation can be done if the car's dashboard has an opening for this unit as shown in Fig. 6. The car's dashboard should have a thickness of 4.5 mm ~ 6 mm in order to make the installation of the unit.

Installetion Procedurea

1. Insert tha ① MOUNTING COLLAR into the car's dashboord and band the mounting springs correspondingly by means of a screwdriver, as shown in Fig. 7.
2. Befcra final mounting the unit to the car's dashboard, raad "To Secure the Rear of the Unit" which is explained at right and check whether the rear of the unit is properly aecurad to the fire wall of car.
   Rafar te either types (TYPE 1 or TYPE 2) that the installation is beat suitable for the unit. Also check the electrical connacticns by referring to this installation instructions. Mount the unit to the car's dashboard as shown in Fig. 7.
3. New insert the unit into the ①MOUNTING COLLAR and alida in until tha lock springs engage on the right and left aides (distinct audible click). See Fig. 7.
4. Placs the ⑫ TRIMPLATE firmly onto the unit.
5. Aftar installation reconnect the negative (−) battery terminal.

UNIT REMOVAL

- First remove the ⑫ TRIMPLATE.
- Then remove the unit from the car'a dashboard by placing the ⑪ DISMOUNTING PINS into holes provided on the left and right of the escutcheon and pushing them in until a click can be heard (system unlocked).
  Remove the unit with the help of the ⑪ DISMOUNTING PINS as shown in Fig. 8.

To Socuro tho Rear of the Unit

- **Ualng the Rear Support Strap** (See TYPE 1)
  Fix one end of the ⑥REAR SUPPORT STRAP tc the rear of the unit, and the other end to the Fire Wall of Car, or some other solid area.
- **Ualng the Rubber Cuehion** (See TYPE 2)
  If there is an existing Rear Support Bracket on the Fire Wall of Car, simply place the ②RUBBER CUSHION over the ⑨ MOUNTING BOLT on tha rear of the unit. Than mount the rear of tha unit to tha axisting Rear Support Bracket.

NOTE: For installation to cars equipped with trip or navigational computer, all electronic memory settings previously registered on the computer would fade out when the battery terminal is disconnected. For this type of car, battery could not be disconnected (unless necessary) thus. wiring connection and installation of this unit should be carefully done and short-circuit should be avoided.

Installation Parts Liat

No.	Item	Q'ty
①	MOUNTING COLLAR	1
②	RUBBER CUSHION	1
③	SPACER WASHER (5 mmϕ)	2
④	SPRING WASHER (5 mmϕ)	2
⑤	HEX. NUT (5 mmϕ)	2
⑥	REAR SUPPORT STRAP	1
⑦	TOOTHED LOCK WASHER (5 mmϕ)	1
⑧	POWER CONNECTOR	1
⑨	MOUNTING BOLT (5 mmϕ)	1

No.	Item	Q'ty
⑩	HEX. BOLT (5 mmϕ × 25 mm)	1
⑪	DISMOUNTING PIN	2
⑫	TRIMPLATE	1
⑬	LENS CLEANER	1
⑭	REMINDER CARD	1
⑮	MAGIC TAPE	1

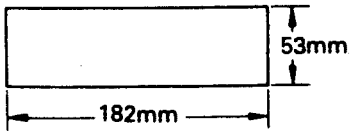


Fig. 8

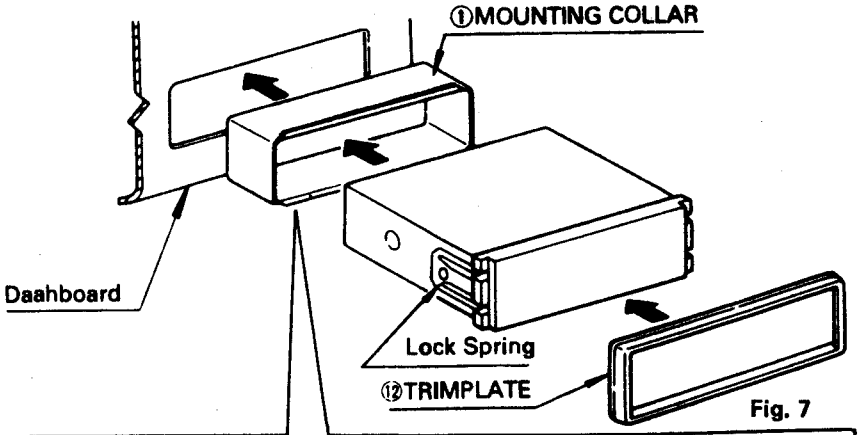


Fig. 7

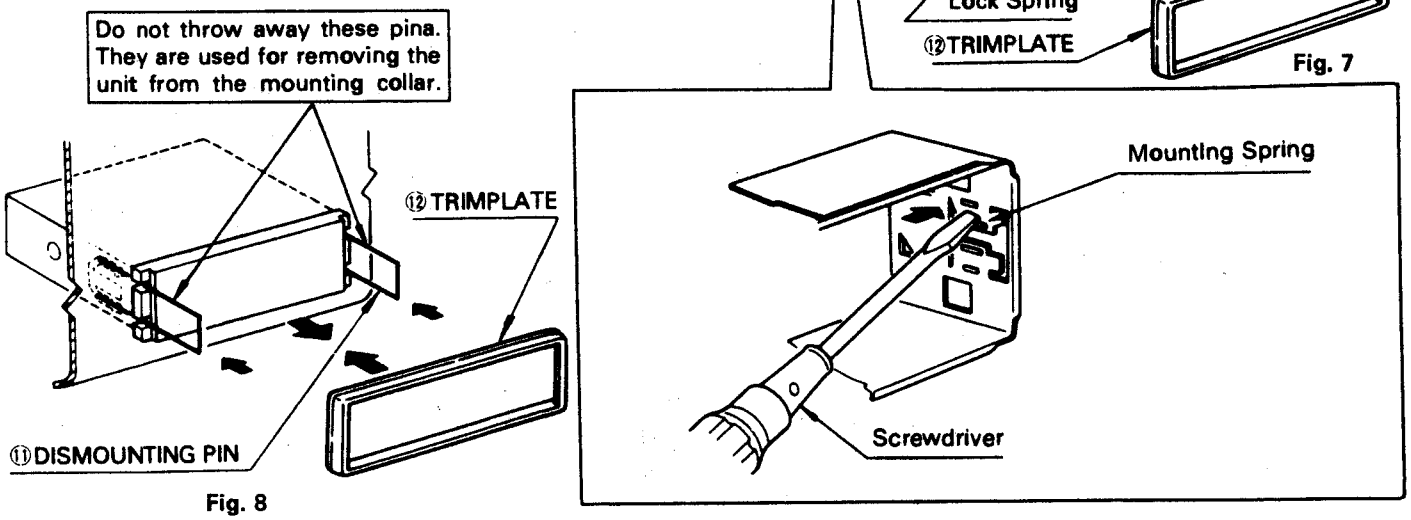
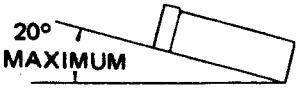
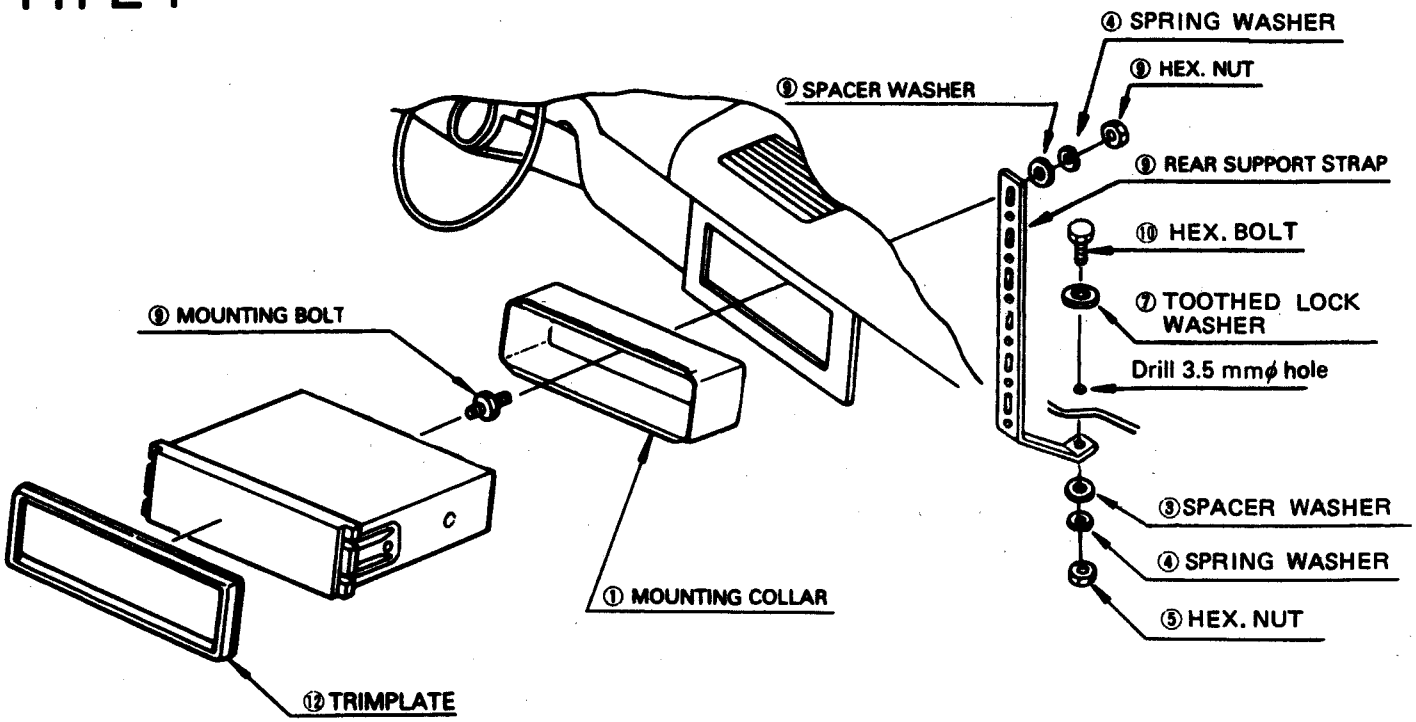

Do not throw away these pina. They are used for removing the unit from the mounting collar.
⑫TRIMPLATE
⑪DISMOUNTING PIN
Mounting Spring
Screwdriver

Fig. 8

NOTE:
Ths unit should be installed in e horizontal position with the front end up at a convenient angle, but not more then 20°.

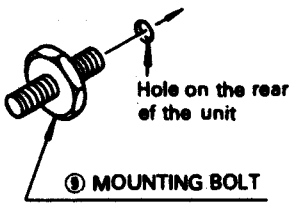


TYPE 1

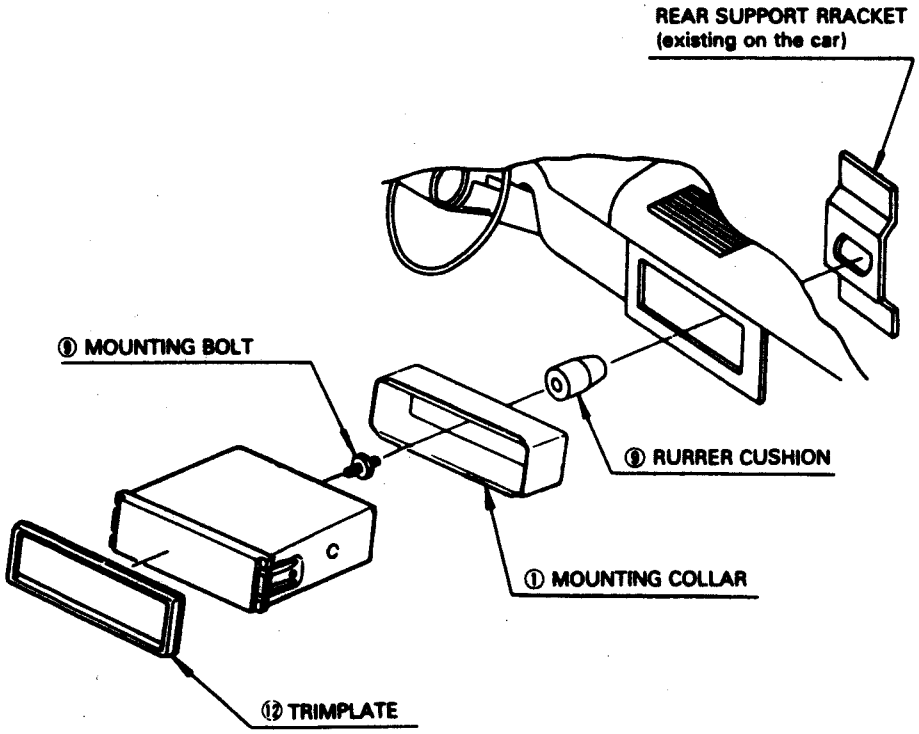


MOUNTING BOLT PREPARATION

Use a suitable wrench to tighten the ⑨ MOUNTING BOLT.



TYPE 2



Powar Supply : DC 12V (11V ~ 16V)
Test Voltage 14.4V
Negative Ground

Tona Action : Bass; ±10dB at 100 Hz
Treble; ±10dB at 10 kHz

Max Powar Output : 2 × 25W, 2 × 13W
(DIN45 324, at 4Ω)

Loudnass Control : +8dB at 100 Hz
+8dB at 10 kHz

Currant Consumption : 1.7A (tape mode,
0.5W, 2-speaker)

Spaakar Impodanca : 4 ~ 8Ω

Battary Back Up Currant Consumption : Less than 5mA

Car Stareo

Reproduction System : 4-Track, 2-Program Stereo
Tape Speed : 4.76 cm/sec.
FF/Rewind Time : Less than 90 sec. (C-60)
Frequency Response : 30 ~ 14,000 Hz (Normal)
30 ~ 17,000 Hz (Metal)
Wow/Flutter : 0.07% (WRMS)
Signal/Noise Ratio : 52dB (Dolby "B" on; 62dB)
Output Voltage : 750 mV (Ref. level; 0 dB)

FM Steree Redie

Frequency Range : 87.5 ~ 108 MHz
Intarmediate Frequency : 10.7 MHz
Maximum Sensitivity : 0 dB/μV, (S/N 10 dB)
FM Stereo Sensitivity : 10 dB/μV
SK/BK Sensitivity : 13 dB/μV
Output Voltage : 600mV (22.5 kHz Dev.)

MW Radie

Frequency Range : 531 ~ 1,502 kHz
Intermediata Frequency : 450 kHz
Maximum Sensitivity : 20 dB/μV (at 0.5W)
Output Voltage : 450mV (30% Mod.)

LW Radio

Frequency Range : 153 ~ 281 kHz
Intermediate Frequency : 450 kHz
Maximum Sensitivity : 22 dB/μV (at 0.5W)
Output Voltage : 450mV (30% Mod.)

Dimansions (Main Unit) : 178(W) × 50(H) × 150(D)mm
Waight (Main Unit) : 1.8kg

BEMOTE UNIT

Battery : DC 1.5V × 2 R03 (UM-4)
(Use two)
Dimensions : 70(W) × 80(H) × 18(D)mm
Weight : 80g

NOTE:
Specifications and the design are subject to possible modification without notice due to improvementa.

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

YEFM281445 B0888-0 Printed in Japan